

# Consumers' Research Bulletin



## October 1952

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# Consumers' Research Bulletin

## OFF THE EDITOR'S CHEST

**R**ELY on well-known brands," admonishes one of the slick-paper women's magazines in giving advice on how to buy sheets. Just how will that help the consumer? According to Brand Names Foundation, Inc., "you know exactly what you're getting when you ask for brand name goods." The doctrine that the consumer's best guarantee of high-quality products — and the only one he needs — is the purchase of well-known, extensively advertised brands is one that has been promoted by various trade and national advertising interests for many years.

As Consumers' Research's subscribers know, however, from personal experience and examples that we have brought to their attention over a period of many years, a recognized brand name does not necessarily assure continuity or uniformity of quality. It is not just small, obscure manufacturers of private brands, but some of the biggest and best known names in the field that fail to live up to their reputations. One of the outstanding examples that has occurred in recent years was that of the Simmons Company, a leading manufacturer of springs and mattresses. The Simmons Company put out an electric blanket which in 1947 was found to give good performance under laboratory tests. In actual use, however, some blankets gave trouble due to a faulty control box unit, a difficulty that was apparently inherent in the design. Several consumers who experienced difficulty with their Simmons electric blankets complained of delay and high charges for repairs. Eventually, the Simmons Company announced its withdrawal from the electric blanket business and sold the finished stock of blankets on hand to a distributing company. When consumers attempted to have difficulties corrected or repairs made by the Simmons Company, they were advised that such service was not handled by the Simmons Company — as they had a right to expect — but by a distributor, comparatively unknown so far as consumers were concerned. One purchaser who wanted her Simmons blanket repaired received a form letter suggesting that she exchange the old blanket for a brand new blanket of another make; there would be an additional charge of \$10.

Subsequent checking on the situation by CR brought to light the fact that the wholesale distributor to whom the Simmons Company had turned over its stock of electric blankets had in turn sold nearly all the remainder to a leading mail-order house.

It should be pointed out in fairness to the Simmons  
(Continued on page 18)



OCTOBER 1952

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Consumers' Research functions to provide unbiased information on goods bought by ultimate consumers. For their benefit (not for business or industry) and solely with the funds they provide, CR carries on tests and research on a wide variety of goods, materials, and appliances, and publishes the findings in CR Bulletin. Consumers' Research is a non-profit institution, and is organized and operates as a scientific, technical, and educational organization.

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Symbols used to indicate sources of data and bases of ratings: A—recommended on basis of quality; AA—regarded as worthy of highest recommendation; B—intermediate with respect to quality; C—not recommended on basis of quality; cr—information from Consumers' Research's own tests or investigations; 1, 2, 3—relative prices, 1 being low, 3 high. Note that price and quality are completely differentiated in CR's listings; a quality judgment is independent of price; \$1, \$2—year in which test was made or information obtained or organized by the staff of Consumers' Research.

It will be advantageous if you will, whenever possible, send prompt notice of change of address at least 5 weeks before it is to take effect, accompanying your notice with statement of your old address with name in full. At least a month's notice must be given in any case. This rule, however, regarding long advance notice does not apply to military personnel.

CR will, of course, gladly change addresses for men and women in the services as often as required by changes in station and other circumstances.

★★★For a brief cumulative index of the 1952 BULLETINS preceding this issue, see page 27.

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## The Consumers' Observation Post

"TELEVISION NECK" is a new ailment currently making its appearance. The symptoms are described by Dr. William Kaufman of Bridgeport, Conn., in a letter to the Journal of the American Medical Association as including measurably increased limitation in ranges of neck movement and pain or discomfort at the back of the neck, sometimes extending into the shoulders and upper back. The discomfort was caused by maintaining strained postures of the head and neck for prolonged periods of television viewing, and Dr. Kaufman noted that when both husband and wife had favorite chairs for watching a program the discomfort occurred on opposite sides of their bodies. One suggested remedy was to raise the television set so that the screen could be viewed comfortably without awkward straining.

\* \* \*

MANY NEW FERTILIZERS for the backyard gardener are being advertised and distributed in a wide variety of stores, including grocery supermarkets. Most of them are in the form of powders or tablets designed to be dissolved in water before being applied, or are in liquid form. Usually these products are the customary formula of 5-10-5 or 4-12-4 (percentage of nitrogen, phosphorus, and potash available), or they may be even more concentrated. The materials used and the wording of the labels must conform with the laws of the state in which they are sold. As a rule they are considered fully satisfactory in terms of the plant nutrients which are present, but they are expensive, particularly if convenience is not an important factor.

\* \* \*

CONTROVERSY CONTINUES unabated over the question of whether compulsory fluoridation of drinking water in order to control dental caries in children is desirable or not. As one food journal wisely points out, the content of fluorides in water must be very exactly controlled for safety at one part per million; lesser amounts fail to control dental caries effectively, while only slightly higher concentrations may build up chronic toxicities. The journal notes that baby food manufacturers feel they are unable to use city water supplies containing fluorides in factory operations because they cannot permit the introduction of such quantities of fluorides into infant food.

\* \* \*

THE HOME PERMANENT WAVE battle for women's patronage is shaping up into quite a brawl. The Richard Hudnut Division of Warner-Hudnut has put out a series of advertisements warning of the dangers to the hair from using non-neutralizer home permanents. One of the ads claimed that repeated exposure of the hair to prolonged saturation with home waving lotions without neutralization had led to serious damage of the hair. Gillette's Toni Co. (Prom Home Permanent) complained of unfair competition to the Federal Trade Commission, while other manufacturers of home permanents that do not require a neutralizer such as the Pepsodent Division of Lever Bros. (Shadow Wave), and Procter & Gamble (Pert) watched with interest from the sidelines. The Federal Trade Commission is planning to investigate the entire industry's advertising, but is reported to have received few complaints from consumers. The Federal Food and Drug Administration is also going to have a look at the extent of the damage alleged to be caused by home permanents. Consumers who have had undesirable results from particular brands may wish to send the Food and Drug Admin., Washington 25, D.C., an account of their difficulties.

THAT BILL to license New York City TV repairmen that we reported in February 1952 had been passed to protect set owners from gyps and general incompetence in the servicing and repair field was held up by the Board of Estimate and never became law. Complaints about racketeering in the TV repair field, however, are reaching the Better Business Bureau and shady practices have been vividly set forth in several articles in New York newspapers, but the New York City politicians appear deaf to consumers' woes. One clue to their attitude may be found in a little item that appeared in the New York World Telegram and Sun suggesting that the effective opposition was coming from the New York City boss of the A.F. of L. who was afraid that the licensing provisions of the proposed bill would curb his power over local electricians.

\* \* \*

CHEESE MAKERS are no longer using a wrapper containing dehydroacetic acid for inhibiting mold. We are pleased to note this step just a few months after the appearance of our earlier criticism of this practice in June 1952. The Food and Drug Administration has taken prompt action in seizing a number of shipments using this chemically treated wrapper and its use has now been reported to have been abandoned completely.

\* \* \*

LEAD POISONING IN CHILDREN is a matter of concern to public health experts. In the city of Baltimore alone, 54 cases were recorded in the period June 30, 1951 through to December 1951. In a study reported in the Baltimore Health News, it was indicated that 60 percent of the children suffering from lead poisoning were in their second year, at the teething age when they had a greater tendency to put things in their mouths. In a field checkup of diagnosed cases of lead poisoning, it was discovered almost without exception that the cause was pica (craving for substances not fit for food) associated with the ingestion of lead paint. The City Health Department of Baltimore has added to its housing regulations the provision that no lead paint may be used for interior painting of any dwelling, an example that might well be followed by other cities.

\* \* \*

THE PUBLIC'S ATTITUDE TOWARD ADVERTISING was described as "ominous" by a university dean at a recent advertising convention. It appeared that the good conservative middle class just didn't believe those claims for the magical properties of chlorophyll, the effectiveness of treating the throat with cigarette smoke, or the wonder-working effects of hair tonics — at least too many of them don't for the advertising men's comfort.

\* \* \*

THE INSECTICIDE that will kill bugs and have no harmful effects on human beings will reap a fortune for its inventor. DDT, once a promising discovery, is now known to be ineffective in certain cases against insects and it is distinctly toxic to human beings. Another new insecticide that has offered promise is chlordan, subject of an article in Reader's Digest last spring which failed to stress its potential dangers to human beings. On the basis of Food and Drug Administration studies, it is considered about half as toxic to the average man as DDT, but studies of chronic toxicity or the effect of repeated exposure indicate that it is about five times as poisonous as DDT. The chief defect of the Reader's Digest article was its recommendation that the chemical be painted in the seams and tufts of a mattress to kill bed bugs and sprayed on clothes that were infested with moths or on rugs infested with carpet beetles. This advice, a number of trade publications were quick to point out, was in direct opposition to federal regulations for the enforcement of the Insecticide Act which forbid any directions on the label of an insecticide containing chlordan recommending treatment of clothing, bedding, or furniture with the substance. The material is potentially dangerous and should be used with care, preferably by an expert fully aware of the need for proper caution in handling.

(The continuation of this section is on page 33)

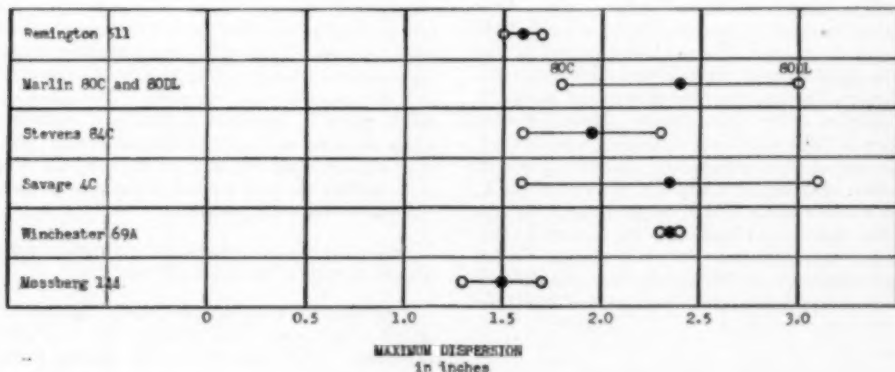
## .22 Caliber Rifles

THE .22 caliber rim-fire rifle has long been a favorite for target shooting, killing of small animals, crows, hawks, and other troublesome birds. Its great popularity is due to the fact that a gun of fairly good shooting quality is available at a relatively low cost, and to the fact that the ammunition is inexpensive. All experienced users of firearms know that the .22 rifle is a very deadly weapon, and it must be handled with as much care as a large-caliber gun, pistol, or shotgun. Parents sometimes make the mistake of assuming that the .22 rifle is a suitable toy for a boy, but children and others not carefully trained in the use and handling of firearms should never be allowed to shoot or handle any gun. No adult who is himself lacking in expertness in the use of firearms should take the responsibility for indoctrinating a young boy or youth in the handling of the .22 or any other rifle.

The principal features considered in evaluating the relative merits of the group of 12 low-priced .22 caliber rifles tested were: safety features,

trigger pull, functioning of working parts, accuracy, and general appearance and finish of wood and metal parts. The safety features were considered to be of primary importance. The "safety" should be readily accessible and should have a definite, easily-sensed motion in shifting from one position to the other. It should be so designed and placed that its position cannot be accidentally changed. Indication by color or other means should show the position in which the safety is set, but this feature is too often lacking in rifles of a number of makes. It is also desirable that, when the safety is on, it does not lock the bolt.

The trigger pull should be free of creep and should have a "crisp" let-off. A force of three to seven pounds should be required to pull the trigger. A light trigger pull (less than 3 lb.) is considered to be a hazard, as the gun could be too easily discharged accidentally. With a heavy trigger pull, the user may find it impossible to hold the gun sufficiently steady when shooting.



The open circles indicate averages of the maximum dispersion measurements for 6 target groups for each rifle. Solid circles are the mean values of the average dispersions for the two rifles of the same make.



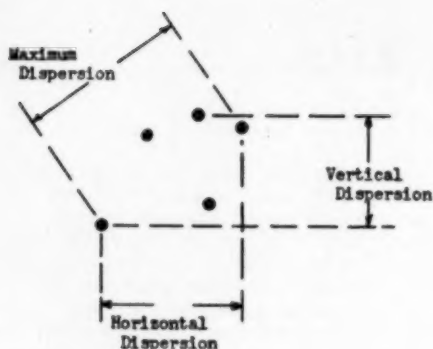


Diagram showing dispersion of shots in the target and its measurement.

The working parts of the rifles were examined for proper operation. Cartridges should be fed into the chamber with no scraping of the bullet or jamming<sup>1</sup>, every cartridge should be fired, and every cartridge should be removed by the extractor. Headspace should fall within fairly narrow limits. (Headspace is the space between the face of the bolt when the bolt is closed, and the base of a cartridge in the chamber.)

To check the accuracy of the rifles, a 15-power telescope sight was mounted on each gun, and all firing was done from the prone position with a sandbag rest, on a 100-yard indoor range. This method of shooting was used because a rifle fired from a clamp rest does not place bullets at the same point as one which is held freely with the shooter's hands in the normal way and accurately pointed at the same target. Three different types of "long rifle" cartridges were used in each gun, one of standard quality, and two of match quality (*Remington Kleanbore*, *Winchester EZX*, and *Western Super Match*, respectively). Groups of five shots were fired, and the maximum dispersion was measured for each group. (Maximum dispersion is the distance between the two shots of the group which are farthest apart, or

more simply, the diameter of a circle that just encloses the group of shots.) To indicate relative accuracy, six groups (two groups with each type of ammunition) were fired with each gun, and the average maximum dispersion was determined. The maximum dispersion (averaged) had values ranging from 1.3 inches to 3.1 inches for the rifles tested. It is interesting to note that two of the rifles were more accurate with the standard quality ammunition than with match quality ammunition; these were one of the two similar *Remingtons* and one of the two similar *Winchesters*. Accuracy was not given much consideration in determining the ratings of the guns as even the poorest group obtained was believed to represent better accuracy than could normally be obtained with the sights supplied on the guns, and the ratio between dispersion of the best grouping and the worst grouping was fairly small relatively, only about two to one. The accuracy factor, however, would become very important to the user who, as many do now, expects to equip the rifle with a telescopic sight, and to rely upon it for very accurate placing of bullets. In this connection, it may be mentioned that there is quite a growth of interest in extreme accuracy of rifles, and there are even groups who interest themselves in the constant modification of rifles and ammunition by special techniques of high precision so that they judge the gun's performance almost entirely by its accuracy as an instrument for placing successive bullets into a circle of the smallest possible diameter.

The type of sight was not considered in rating the guns, as this is a matter of personal opinion with expert shooters. A person without experience, buying a rifle for the first time, should try sighting through open and peep sights in turn in order to see which seems the easier to aim with. Better still would be to try shooting a few rounds with each sight using the rifle of a friend or acquaintance for this purpose. The open or notch sight is perhaps particularly desirable where shooting will be done in unfavorable light. Where target shooting is to be the chief use of a gun, possibly the peep sight will, for most people, give more favorable accuracy.

Table I shows the results of the accuracy tests with each type of ammunition used.

Two rifles of each of the brands listed were tested. All were bolt action, clip magazine repeaters. The instructions for all the rifles provided for short, long, and long rifle cartridges. The *Mossberg* instructions stated that the arm was "chambered and made especially for .22 long rifle regular or high-speed cartridges" but

<sup>1</sup>Shaving of lead from the bullets sometimes takes place when the bullet is fed from the clip into the chamber of the gun. When the rifle is one which removes a substantial amount of metal in this way, a considerable increase in dispersion of the bullets can result, due to the alteration of their shape and weight distribution. (In the test, however, it turned out that one rifle in which this fault was noticed gave very good accuracy in shooting.)

that it "will also handle .22 short and long cartridges."

The rifles which showed the highest degree of uniformity as between the two samples in accuracy in shooting were the *Winchester, Remington, and Mossberg*.

Some readers may detect what they suppose are discrepancies in addresses or model numbers for some of the rifles listed. It should be noted, however, that the numbers given are those given on the rifles themselves as described in the listings. Makers sometimes add a letter to indicate differences in the sight with which the particular rifle is equipped, perhaps for other reasons. Manufacturers' practices in model numbering

are, in at least a few cases, confusing, as the number on the rifle itself may not agree with the number catalogued for a rifle of the same specifications.

#### A. Recommended

*Remington Scoremaster, Model 511* (Remington Arms Co. Inc., Ilion, N.Y.) \$28.65, with peep sight. 6-shot clip. 25-in. barrel. Safety has definite positioning and color coding, does not lock bolt (desirable). Has cocking indicator. Finish of metal and wood, good. Trigger pull and let-off, very good. Clip supplied with one sample caused lead to be shaved from some cartridges. Accuracy in shooting, very good (second best in group tested). As to safety features, this was the best rifle in the group.

Table I — Showing Results of Accuracy Test

Rifle <sup>1</sup>	Average Maximum Dispersion using as ammunition: <sup>2</sup>			Over-all Average, Maximum Dispersion
	<i>Remington Kleanbore</i>	<i>Winchester EZX</i>	<i>Western Super Match</i>	
<i>Marlin 80C</i>	1.9 in.	1.7 in.	1.9 in.	1.8 in.
<i>Marlin 80DL</i>	4.4 in.	2.4 in.	2.3 in.	3.0 in.
<i>Mossberg 144</i>	2.3 in.	2.1 in.	0.8 in.	1.7 in.
<i>Mossberg 144</i>	1.4 in.	1.0 in.	1.4 in.	1.3 in.
<i>Remington 511</i>	1.7 in.	1.2 in.	2.2 in.	1.7 in.
<i>Remington 511</i>	1.2 in.	1.8 in.	1.6 in.	1.5 in.
<i>Savage 4C</i>	2.1 in.	1.4 in.	1.3 in.	1.6 in.
<i>Savage 4C</i>	3.5 in.	1.8 in.	4.0 in.	3.1 in.
<i>Stevens 84C</i>	3.2 in.	2.2 in.	1.4 in.	2.3 in.
<i>Stevens 84C</i>	1.8 in.	1.6 in.	1.4 in.	1.6 in.
<i>Winchester 69A</i>	1.6 in.	3.7 in.	1.8 in.	2.4 in.
<i>Winchester 69A</i>	2.6 in.	1.8 in.	2.6 in.	2.3 in.

<sup>1</sup>Two samples of each make were tested.

<sup>2</sup>*Remington Kleanbore* is a "standard quality" ammunition; *Winchester EZX* and *Western Super Match* are known as "match quality" ammunition.

Table II — Showing Safety Features on the Various Rifles

Rifles	Safety Features			
	Definite Positioning	Color Indication	Does not Lock Bolt (Desirable)	Cocking Indicator
<i>Remington 511</i>	✓	✓	✓	✓
<i>Marlin 80C</i>	—	—	✓	✓
<i>Marlin 80DL</i>	—	—	✓	✓
<i>Stevens 84C</i> (Savage Arms)	✓	—	✓	✓
<i>Savage 4C</i>	✓	—	✓	✓
<i>Winchester 69A</i>	—	—	—	—
<i>Mossberg 144</i>	—	✓	✓	✓

A check mark indicates that the rifle has the feature indicated.

A dash indicates that the rifle lacks the feature.

### B. Intermediate

*Marlin, Models 80, 80DL* (Marlin Firearms Co., 79 Willow St., New Haven, Conn.) \$25.80 and \$27.90, with open sights and peep sights. 8-shot clip. 24-in. barrel. Safety positioning is not as positive as would be desired; safety is not color coded; does not lock bolt (desirable). Has cocking indicator. Finish of metal and wood, good. Trigger pull and let-off on *Model 80*, very good, but pull on other sample was very light (3 lb., about the safe lower limit). Clip on one sample was very difficult to remove from its chamber. Accuracy in shooting, fair.

*Mossberg, Model 144* (O. F. Mossberg & Sons, Inc., New Haven 5, Conn.) \$31.95, with peep sight. 7-shot clip. 26-in. barrel. Positioning of safety was not so positive as would be desired, but safety has color coding; does not lock bolt (desirable). Has cocking indicator. Finish of metal, excellent; of wood, good. Trigger pull and let-off, very good. Clips with both samples released first cartridge when clip was inserted with bolt open. One clip caused lead to be shaved from cartridges. Accuracy in shooting, very good (best of the group tested).

*Savage, Model 4C* (Savage Arms Corp., Chicopee Falls, Mass.) \$26.65, with open sights. 5-shot clip. 24-in. barrel. Safety has definite positioning but no color coding; does not lock bolt. Has cocking indicator. Finish of metal, fair; of wood, very good. Trigger pull and let-off, good on one sample, but very heavy

(over 8 lb.) with creep, on other sample. Clip with one sample failed to feed first two cartridges properly. Accuracy in shooting, fair. Design similar to *Stevens Model 84C*.

### C. Not Recommended

*Stevens, Model 84C* (Savage Arms Corp.) \$24.25, with open sights. 5-shot clip. 24-in. barrel. Safety has definite positioning, but no color coding; does not lock bolt (desirable). On one of the two samples, the safety did not prevent the gun from firing, owing to a fault in mechanical design, easily corrected by the maker. (*Savage 4C* had similar mechanism, but safety did operate correctly on the *Savages*.) Has cocking indicator. Finish of metal, fair; of wood, poor. Trigger pull and let-off, fair. Functioning, good. Accuracy in shooting, good.

*Winchester, Model 69A* (Winchester Repeating Arms Co., New Haven, Conn.) \$28.65, with peep sights. 5-shot clip. 25-in. barrel. Safety positioning not so positive as would be desired; safety has no color coding; it locks bolt (undesirable). No cocking indicator. Headspace excessive on one sample (undesirable). Finish of metal and wood, good. Trigger pull and let-off, very good. Accuracy in shooting, fair; the two samples gave very close to same dispersion figures.



## 1952 Refrigerators and a Refrigerator-Freezer Combination

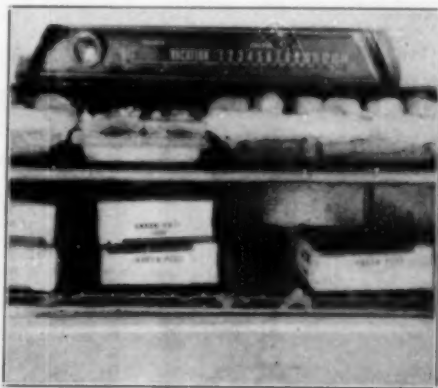
Mostly with automatic or specially-convenient defrosting

The majority of manufacturers of electrical refrigerators have this year included in their line at least one model equipped with an automatic or semiautomatic defrosting device which does the defrosting job in a matter of minutes. The reader of the accompanying article will see that these devices are by no means the perfectly-functioning mechanisms that the salesmen talk about and that the advertising will imply. We suggest that our readers should not be too ready to turn in an old refrigerator in good working order at a great loss in order to obtain a model having the convenient quick-defrosting feature. There is good reason to believe that in the near future, important changes will be made in the designs of defrosting devices and associated parts of the refrigerators so that the difficulties and inconveniences which now beset them may be eliminated. Caution would seem to be the watchword for the prospective purchaser, for the present.

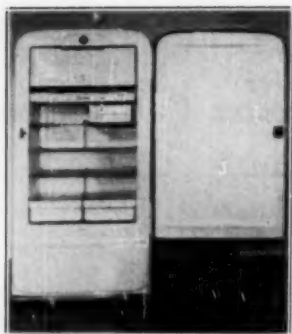
The accompanying article includes listings of 8 refrigerators and 1 combination refrigerator-freezer. Several models each of Crosley, Philco, and Kelvinator are expected to be covered in future articles, which will be prepared as soon as the data are in hand and have been checked.

"Dealers consider automatic defrosting the most powerful sales tool introduced for the refrigerator in years." This statement was made by the director of home economics of one of the largest manufacturers of electric refrigerators, but coupled with it was the admission that automatic defrosting is still in the Model T stage and that not every purchaser is satisfied with it. An engineer from another large refrigerator manufacturing company commented that the true value of high-speed defrosting was still a question, in his mind.

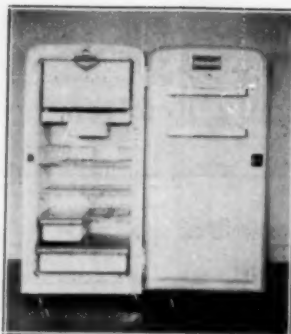
Many a housewife subjected to strong sales pressure may be tempted to turn in her good, economical, smooth-running refrigerator at a considerable loss to obtain one equipped with automatic defrosting, in the belief that she will be able to rid herself of the unpleasant chore of defrosting manually, which is usually done by removal of the food in the freezing chamber and insertion of trays of hot water until the frost is removed. Unfortunately some automatic defrosting devices do only a half-way job, for there still remains the need to defrost and clean the refrigerator by hand from time to time; in many refrigerators there will be formation of icicles and freezing together of frozen-food packages as the result of the automatic defrosting action, and all of this will call for some intervention by the homemaker to keep things in order. Removal of the icicles and separating the frozen-



Ice and frost formation particularly noticeable on ice-cube trays of Norge Self-D-Frost.



Wards Supreme 69A971R



Coldspot Thermo-matic F9T-C



Frigidaire Cyclo-matic IR-90

food packages may be more of a task, indeed, than was manual defrosting. Another disadvantage of automatic defrosting is that in some makes of refrigerators of the newest models the water from the ice melting during defrosting drips down into the ice cubes, where it freezes thereafter, giving the ice cubes an off-taste.

An automatic defrosting device is very often essentially a clock which at a predetermined time every 24 hours energizes a built-in electric heater for a few minutes to melt off the frost. On some refrigerators, a different system is used, in which the heater operates after the door has been opened a specified number of times (*Westinghouse*) or after a set amount of time has accumulated during which the door was open (*Coldspot*).

The *Admiral* and *Frigidaire* differed somewhat from the others. With the *Admiral* the defrosting was not fully automatic, but under the

control of the user, who could start the defrosting cycle whenever desired, by pressing a button. At present, CR considers this may be the most practical solution to the problem, for the homemaker can remove ice cubes and frozen foods to the storage compartment for the short space of time required for the defrosting, then wipe out the freezer compartment at the end of the defrosting cycle before the defrost water has a chance to refreeze. The *Frigidaire* has no clocks, counters, or heating coils. It has a refrigerated plate in the rear of the food storage space which collects a large proportion of the frost. At the end of each cycle of the motor-compressor, the temperature of the plate rises to a little above the freezing point, permitting the frost to melt and drain away. This manufacturer's instruction book recommends that the food-freezer compartment should be defrosted manually at 3- to 6-month intervals.



General Electric LF8JS1



Westinghouse Frost-Free DFD-84



Admiral 982 A

## Test Methods

The refrigerators were allowed to stand in a room heated to a constant temperature of 110° with their doors open until all the parts were at room temperature. The doors were then closed and the refrigerators turned on; measurements of the electrical energy consumed were taken at one-half hour intervals until the average temperature reached a value of 46°F or lower. Curves were plotted from these data, and the time taken, and electrical energy consumed to bring the temperature in each box to 46°F were determined. This analysis gives a measure of the refrigerating capacity (adequacy of the refrigeration unit to handle its load) of each unit; it also gives a measure of the "reserve capacity" of the machine, a point of practical importance in the use of any refrigerator, especially in places where there is a long spell of hot summer weather or temperatures in the kitchen from cooking and baking are high.

After stable temperature conditions were reached, performance data were obtained with different settings of the control dial, the temperature in the test room being maintained in one case at 90°F and in another at 110°F.

By experience it has been learned that the cost of operating a refrigerator loaded with food and used under average conditions in a home will often be close to the operating cost determined under test conditions in a room held accurately and constantly at 80°F. Operating costs at 80°F have been approximately determined by calculation and are given in Table II, page 13. If there is a considerable "food load," which implies putting into the refrigerator from time to time foods which are warm or at room temperature, the energy consumed by the refrigerator at a room temperature of 90° will more closely approximate the operating cost to the consumer. A range of variation of 5 to 10 percent in energy consumption of two refrigerators that are nominally alike is common, due to unavoidable non-uniformity in manufacture. The percent of the time during which the motor ran was determined at both 90°F and 110°F. A low figure is desirable as it tends to indicate adequate refrigerating capacity and longer life for the refrigerator mechanism.

In the ice-making tests, the time to make the regular complement of ice cubes, with the box in a room at 110°F, was measured.

In the listings, only the time for freezing the

Table I

Table showing time required for the various refrigerators to be "pulled down" in temperature from 110°F (room temperature, outside and, at start, inside of box) to 46°F.

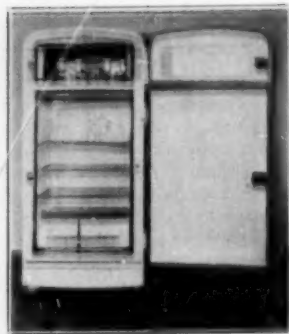
	Price	Actual cu. ft.	Price per Actual cu. ft.	Number of hours required to reduce temperature in food-storage compartment to 46°F	Hours per (total) cu. ft.
<i>Coldspot F9T-C</i>	\$320	9.4	\$34.00	3.35	0.36
<i>General Electric LF8JSI</i>	357	7.7	46.40	3.00	0.39
<i>M. W. Supreme 69A971R</i>	265	9.2	28.80	3.60	0.39
<i>Frigidaire IR-90</i>	400	9.1	44.00	3.80	0.42
<i>Westinghouse DFD-84</i>	400	8.3	48.20	3.68	0.44
<i>Norge DSD-86</i>	360	7.9	45.60	5.2	0.66
<i>Philco 828</i>	350	8.5	41.20	6.4	0.75
<i>Admiral 982 A</i>	340	8.9	38.20	6.7	0.75
Combination Refrigerator-Freezer					
<i>Hotpoint EG-87</i>	467	8.5	54.90	2.19	0.26



Norge Self-De-Frost DSI-56



Hotpoint EG-87



Philco 828

full complement of ice cubes is given; the time to freeze cubes in particular locations varied according to the location of the trays. In the General Electric refrigerator, for example, three of the ice-cube trays were frozen solid in 4½ hours, but the fourth tray was not frozen after 5½ hours. The average temperature of the air in the freezer storage space was also measured. This is important for, as will be noted, the freezer air temperatures ranged from 3.9° to as high as 26.5° with a room temperature of 90°. On the basis of CR's temperature measurements in the freezing chambers, only the Hotpoint refrigerator-freezer combination would be considered satisfactory for the storage of ice cream and frozen foods even for short periods of time, though the Frigidaire Cyclo-matic would come close to meeting the requirement mentioned in the following paragraph.

Unfortunately no standards have been adopted for the temperatures to be maintained in the freezer compartments, but it is CR's considered opinion that the freezing space should be capable of maintaining a temperature of 10° or lower, continuously (except for the brief defrost interval), without need to lower the temperature in the general storage compartment below 43°.

Likewise, no standard test methods have been set up for the tests of automatic defrosters. CR's tests, which may well be improved upon as experience becomes available, were devised to check the effect of the higher temperatures reached during the defrosting cycles on high-grade ice cream, and second to determine the effectiveness of the defrosting.

The refrigerators with automatic defrosting devices were given a 48-hour 90° no-load test, during which their freezing compartments contained a full load of ice cubes and two pint packages of ice cream into which thermocouples were inserted in the sides nearest the evaporator walls. On two of the refrigerators (Westinghouse and Norge), the defrosters were set to operate about 21 hours after the start of the test; on the third (Frigidaire) defrosting starts at the end of each cycle of motor-compressor operation. During the test, temperatures of the cabinet air, freezer compartment air, and the ice cream were measured. Energy input and length of time the defroster remained in operation were also measured. It was found that only the Frigidaire maintained the ice cream (of a good grade) in a firm condition; in all the others it was too soft to be satisfactory. (Poor ice cream does not require as low a temperature to maintain proper consistency as ice cream of a better grade.)

For the second test the refrigerators were set up in an open room, completely defrosted and dried. A bowl filled with water was located in the storage compartment of each refrigerator. In the bowl was a partially submerged 15-watt bulb wired so that it burned continuously. After 5 hours, a full load of ice cubes and some packages of frozen food were inserted. A refrigerator without automatic defrosting was included in this test for check purposes. All of the refrigerators with automatic defrosting (except Admiral) were adjusted so that they would defrost once every 24 hours. The Admiral was defrosted by pushing the button provided for that purpose.

Table II

A comparison of monthly operating costs of 1952 refrigerators tested by CR. The electric rate is assumed to be 3½¢ per kwh.<sup>3</sup> The figures in column 4a are monthly operating costs per cu. ft. of total storage space at 90° room temperature.

1	2	3	4	4a	4b	4c	5	5a
Estimated Monthly Operating Cost at Room Temperatures of								
	Total Storage Capacity, cu. ft., Actual	80°	90°			110°		
			per cu. ft., cents	% running time	Average Air Temperature in Freezer <sup>1</sup>		% running time	
<i>Frigidaire IR-90</i>	9.1	\$0.84	\$1.12	12.3	30.4	12.5°	\$2.04	49.8
<i>General Electric LF8JS1</i>	7.7	0.74	.98	12.7	24.8	26.0°	1.68	43.5
<i>Westinghouse DFD-84</i>	8.3	0.84	1.12	13.5	23.3	21.4°	2.34	50.2
<i>Coldspot F9T-C</i>	9.4	0.99 <sup>2</sup>	1.32 <sup>2</sup>	14.1 <sup>2</sup>	31.3 <sup>2</sup>	24.6° 20.9°	2.32 <sup>2</sup>	44.0 <sup>2</sup>
<i>M. W. Supreme 69A971R</i>	9.2	1.05 <sup>2</sup>	1.40 <sup>2</sup>	15.2 <sup>2</sup>	30.1 <sup>2</sup>	23.0° 15.1°	2.45 <sup>2</sup>	51.5 <sup>2</sup>
<i>Admiral 982 A</i>	8.9	1.05 <sup>2</sup>	1.40 <sup>2</sup>	15.7 <sup>2</sup>	31.3 <sup>2</sup>	26.5° 16.5°	2.90 <sup>2</sup>	64.0 <sup>2</sup>
<i>Norge DSD-86</i>	7.9	1.06	1.41	17.9	35.2	16.8°	2.70	64.7
<i>Philco 828</i>	8.5	1.65	2.20	25.9	34.5	22.1°	3.36	64.8
Combination Refrigerator-Freezer								
<i>Hotpoint EG-87</i>	8.5	1.68	2.24	26.4	39.7	3.9°	3.60	64.4

<sup>1</sup>Where two figures are shown for average air temperature in freezer compartment of a refrigerator, the first figure is with baffle in open position, the second and numerically lower figure is with the baffle closed.

<sup>2</sup>With baffle in open position.

<sup>3</sup>Approximate operating costs at other rates may be computed by simple proportion. For example, if you pay 2¢ instead of 3½¢ per kwh. for electricity, cost for electricity for the *Frigidaire* at 90° becomes \$1.12 x 2 ÷ 3½ = 64¢ a month.

only when frost seemed thick enough to require it. As this test, because of limitations of time, does not fully duplicate conditions of use, it was given minor consideration in the ratings; it did, however, give an idea of how well the defrosting systems worked. During this test the refrigerators were opened and inspected each day for a period of 7 days. The refrigerators were given tests to determine the amount of "sweating" of the outer surfaces at relative humidities in the room ranging from 70 percent to 90 percent.

All of the refrigerators were satisfactorily quiet in operation. Relative operating costs are shown in Table II, page 13.

Ratings are on the basis of the appliances' performance as refrigerators — not as combination refrigerator-freezers. None of the refrigerators listed met CR's requirement (on page 12) of a

10° temperature in the freezer space with the food-storage compartment at 43°. The *Frigidaire* came closest to this performance. Subscribers who wish dependable low-temperature storage in the freezing compartment should not purchase a refrigerator, even one with an *A* rating, which has temperatures above 15° in the freezer space. In tests of 1953 model refrigerators, CR proposes not to give *A* ratings to refrigerators that do not meet the requirement mentioned in the second sentence of this paragraph unless and until manufacturers' advertising discontinues claims and implications that the freezer space is suitable for satisfactory storage of frozen foods (including ice cream), for a protracted period.

Outside dimensions given in the listings include hardware. The prices shown are list prices. Ratings are CR52.



### A. Recommended

#### **M. W. Supreme, Model 69A971R** (Montgomery Ward & Co.) \$265.

##### **Dimensions:**

61½ in. high, 32½ in. wide, 27 in. deep. Total rated capacity, 8.9 cu. ft. (actual, 9.2 cu. ft.). Actual shelf area, 18.9 sq. ft. Frozen food storage space, 1.4 cu. ft.

##### **Description:**

This is a refrigerator of the normal type without the new automatic defrosting feature. Plastic baffle under freezer compartment has two positions (winter and summer). Its function in winter is to restrict circulation, prevent the food storage compartment temperature from becoming too low.

##### **Performance in test:**

Time to lower temperature from 110°F to 46°F, 3.6 hr., or 0.39 hr. per cu. ft. (good). In no-load test at 90° room temperature with control set to give 43° in storage compartment, average air temperature in freezer space was 23°F, too high (15.1° with baffle in closed position, good by comparison with other makes tested, but not satisfactory, in CR's opinion). Percent running time, 30.1 (satisfactory). Cost of operation per month, \$1.40 (15.2c per cu. ft.), slightly lower than average. Maximum time required to make 6.6 lb. of ice cubes, 5.2 hr. (0.79 hr. per lb.). Moderate sweating of cabinet at 87° and 86% relative humidity. 1

#### **Goldspot Thermo-matic, Model F9T-C** (Sears, Roebuck & Co.) \$320 in retail stores.

##### **Dimensions:**

58¼ in. high, 28 in. wide, 29¾ in. deep. Total rated capacity, 9.1 cu. ft. (actual, 9.4 cu. ft.). Rated shelf area, 16 sq. ft. (actual, 17 sq. ft.). Frozen food storage space, 1.2 cu. ft.

##### **Description:**

Had a large baffle adjustable to two positions with smaller baffle attached which could be opened or closed. Instructions gave baffle locations for cool-dry weather, warm-humid weather, and hot-extremely humid weather. Control device initiating automatic defroster action receives impulses proportional to length of time door is open. After these impulses have accumulated to a predetermined total time, refrigerator automatically defrosts; the water is collected in a tray at bottom of machine compartment where it evaporates. (Time did not permit tests to determine whether evaporation would take place at a sufficiently rapid rate under all conditions of high atmospheric humidity.) Provision is made for manual operation of the defroster (desirable). Butter conditioner located near top of door. Had 3 ice-cube trays (total, 5.1 lb., 42 cubes).

##### **Performance in test:**

Time required to lower temperature from 110°F to 46°F, 3.35 hr., or 0.36 hr. per cu. ft. (good). In no-load test at 90° room temperature with controls set to give 43° in food storage compartment, average air temperature in frozen food compartment, 24.6°; with baffles closed, 20.9°; both figures too high. Percent running time, 31.3 (satisfactory). Cost of operation per month, \$1.32 (14.1c per cu. ft.), below

average. Maximum time required to make 5.1 lb. of ice cubes, 3.3 hr. (0.65 hr. per lb.). Considerable sweating of cabinet at 87° and 86% relative humidity. After 7 days of operation, ice appeared in the form of droplets on coils under shelf and coils under bottom of freezer space; some ice formation on floor of freezer space. Maximum temperature of ice cream during defrosting, 28.5° (much too high). Maximum air temperature in freezer during defrosting, 52°. Length of defrosting cycle, about 17 min. 2

#### **Frigidaire Cyclo-matic, Model IR-90** (Frigidaire Div., General Motors Corp., Dayton 1, Ohio) \$400.

##### **Dimensions:**

58½ in. high, 31 in. wide, 28¾ in. deep. Total rated capacity, 9.0 cu. ft. (actual, 9.1 cu. ft.). Rated shelf area, 14.9 sq. ft. (actual, 13.2 sq. ft.). Frozen food storage space, 1.26 cu. ft.

##### **Description:**

Automatic defrosting is accomplished by a refrigerated plate (23 x 8½) located about 1 in. from rear wall of food storage compartment. Frost collects on this plate, and melts at each cycle of motor-compressor operation. The defrost water runs to the bottom of the storage compartment, while it drains through a valve into a tray in the motor-compressor compartment where it evaporates (see comment on *Coldspot*). Aluminum sliding shelves (a very convenient feature) and built-in thermometer. Had 3 ice-cube trays (total, 7 lb., 54 cubes).

##### **Performance in test:**

Time required to lower temperature from 110°F to 46°F, 3.8 hr., or 0.42 hr. per cu. ft. (good). In no-load test at 90° room temperature with control set to give 43° in storage compartments, average air temperature in frozen food compartment was 12.5° (close to the desired figure). Percent running time, 30.4 (satisfactory). Cost of operation per month, \$1.12 (12.3c per cu. ft.). Lowest in consumption of electricity of the refrigerators tested. Maximum time required to make 7 lb. of ice cubes, 4.4 hr. (0.63 hr. per lb.). There was moderate sweating of cabinet at 87° and 92% relative humidity. High-grade ice cream was kept firm and hard. After 7 days of operation, there was no frost present on frozen food cartons or ice trays, very slight frost on inside of evaporator, but there was some ice and frost around the rubber gasket on door of frozen food storage space. Instruction book states that food freezer compartment will require defrosting manually every 3 to 6 months. 3

#### **General Electric, Model LF8JS1** (General Electric Co., Bridgeport 2, Conn.) \$357.

##### **Dimensions:**

59¼ in. high, 29¾ in. wide, 28 in. deep. Total rated capacity, 8.7 cu. ft. (actual, 7.7 cu. ft.). Rated shelf area, 15.1 sq. ft. (actual, 13.8 sq. ft.). Frozen storage space, 1.21 cu. ft.

##### **Description:**

Regular type refrigerator without automatic defrosting. Had one sliding shelf, an indicator to show when defrosting is required, and a "butter condi-

tioner" located in door. Had 4 ice-cube trays (total, 6.9 lb., 64 cubes).

**Performance in test:**

Time to lower temperature from 110°F to 46°F, 3 hr., or 0.39 hr. per cu. ft. (good). In no-load test with control set to give 43° in storage compartment, average air temperature in freezer space was 26.0°, much too high for good frozen food storage. Percent running time, 24.8 (very good). Cost of operation per month, 98c (12.7c per cu. ft.). Second lowest in consumption of electricity of all refrigerators tested (but note that this was at cost of too high a temperature in the freezing chamber). 3 trays of ice cubes were frozen solid in 4½ hr., fourth tray not frozen in 5¾ hr. Slight sweating of cabinet at 87° and 86% relative humidity. 3

**Westinghouse Frost-Free, Model DFD-84** (Westinghouse Electric Corp., Mansfield, Ohio) \$400.

**Dimensions:**

61½ in. high, 31 in. wide, 27¼ in. deep. Total rated capacity, 8.4 cu. ft. (actual, 8.3 cu. ft.). Rated shelf area, 16.3 sq. ft. (actual, 15 sq. ft.). Frozen storage space, 1.2 cu. ft.

**Description:**

A plastic tray 1 in. below the frozen food compartment collects the defrost water which drains through a tube to a tray in the motor compartment where it evaporates (see comment on *Coldspot*). Automatic defroster is controlled by a button which is actuated every time the door is opened and closed. The defroster goes into operation after each 60 door openings. Had 3 ice-cube trays (total, 7.3 lb., or 56 cubes).

**Performance in test:**

Time required to lower temperature from 110°F to 46°F, 3.7 hr., or 0.44 hr. per cu. ft. (good). In no-load test at 90° room temperature with control set to give 43° in storage compartment, average air temperature in frozen food compartment, 21.4° (too high). Percent running time, 23.3 (very good). Cost of operation per month, \$1.12 (13.5c per cu. ft.), below average — desirable. Maximum time required to make 7.3 lb. of ice cubes, 4.5 hr. (0.62 hr. per lb.). Considerable sweating of cabinet at 87° and 92% relative humidity. After 7 days of operation, a very large amount of ice in the form of droplets was present on the lower surface of the bottom plate under freezer compartment, some ice on the upper surface of the same plate, where water had dripped and frozen, and some ice droplets on ice cream cartons. High-grade ice cream was very soft, but there were no signs of melting. Maximum temperature of ice cream during defrosting, 21.6°; minimum, 17.3°. Maximum temperature of air in freezer space during defrosting, 29.8°. Length of defrosting cycle, 6 min. 3

**B. Intermediate**

**Admiral, Model 982 A** (Admiral Corp., Chicago) \$340.

**Dimensions:**

55¼ in. high, 28¼ in. wide, 29¾ in. deep. Total rated capacity, 9.4 cu. ft. (actual, 8.9 cu. ft.). Rated shelf area, 18.4 sq. ft. (actual, 16.7 sq. ft.). Frozen storage space, 1.2 cu. ft.

**Description:**

"Semiautomatic" defroster — user starts operation by pressure on a push button whenever desired. Manufacturer recommends defrosting once a week or whenever frost is ¼ in. thick. At the end of defrosting period (7 to 10 min.), refrigerator automatically resumes normal operation. Plastic baffle under freezer compartment had 3 positions, one for defrosting, another for summer operation, and a third for winter operation. 3 ice-cube trays (total, 5.1 lb., 42 cubes).

**Performance in test:**

Time required to lower temperature from 110°F to 46°F, 6.7 hr., or 0.75 hr. per cu. ft. (only fair). In no-load test at 90° room temperature with control set to give 43° in storage section, average air temperature in freezer was 26.5°, too high (16.5° with tray in closed position). Percent running time, 31.3 (satisfactory). Cost of operation per month, \$1.40 (15.7c per cu. ft.), about average. Ice cubes were not frozen at end of 7 hr. (poor). After 7 days of operation, refrigerator was defrosted by use of the button, and the operation was satisfactory. Maximum temperature of ice cream during defrosting, 31.6°, much too high. Maximum air temperature in freezer space during defrosting, 38.8°. Length of defrosting cycle, 6.6 min. Moderate sweating of cabinet at 87° and 86% relative humidity. 2

**Norge Self-D-Frost, Model DSD-86** (Norge Div., Borg-Warner Corp., Chicago) \$360.

**Dimensions:**

55 in. high, 28 in. wide, 29½ in. deep. Total rated capacity, 8.3 cu. ft. (actual, 7.9 cu. ft.). Rated shelf area, 18.2 sq. ft. (actual, 15.8 sq. ft.). Frozen storage space, 1.0 cu. ft.

**Description:**

Automatic defrosting controlled by electric clock. Melted frost drains into a plastic container located in the "meat-keeper" drawer. Butter conditioner located in center of door. Had plastic container with spigot for ice water, tray with 5 individual containers for leftovers, a plastic container for cold drinks, and 3 ice-cube trays (total, 6½ lb., 52 cubes).

**Performance in test:**

Time required to lower temperature from 110°F to 46°F, 5.2 hr. (only fair). In no-load test at 90° room temperature with control set to give 43° in storage compartment, average air temperature in frozen food compartment, 16.8° (see comment on *M. W. Supreme*). Percent running time, 35.2 (satisfactory). Cost of operation per month, \$1.41 (17.9c per cu. ft.), above average. Maximum time required to make 6½ lb. of ice cubes, 6.58 hr. (1.0 hr. per lb.), poor. Slight sweating of cabinet at 85°F and 84%

relative humidity. After 7 days of operation, there was heavy ice formation on chiller tray where defrost water had not drained away and was refrozen, ice droplets on bottom coils of evaporator, heavy ice deposit (one formation 1 in. high) on bottom shelf of frozen food compartment, and heavy ice deposit on ice cream cartons. High-grade ice cream was soft, but there was no sign of melting. Maximum temperature during defrosting of ice cream, 23.4° (minimum, 19.7°). Maximum temperature of air in freezer space, 40.4°. Length of defrosting cycle, about 14 min. **2**

### C. Not Recommended

**Philco, Model 828** (Philco Corp., Philadelphia 34) \$350.

#### Dimensions:

59 $\frac{3}{4}$  in. high, 28 $\frac{1}{2}$  in. wide, 28 $\frac{1}{4}$  in. deep. Total rated capacity, 8.2 cu. ft. (actual, 8.5 cu. ft.). Rated shelf area, 13.6 sq. ft. (actual, 14.7 sq. ft.). Frozen food storage space, 1.12 cu. ft.

#### Description:

This 2-door refrigerator does not have separate controls for freezer and storage sections as the *Hotpoint EG-87*, and is thus not to be confused with a combination refrigerator-freezer. Automatic defroster controlled by electric clock mechanism.

#### Performance in test:

Time required to lower temperature from 110°F to 46°F, 6.4 hr., or 0.75 hr. per cu. ft. (only fair). In no-load test at 90° room temperature with control set to give 43° in storage section, average air temperature in freezer was 22.1° (too high). Percent running time, 34.5. Cost of operation per month, \$2.20 (25.9c per cu. ft.), very high. Maximum time required to make 5.14 lb. of ice cubes, 4 hr. (0.78 hr. per lb.). Considerable sweating of cabinet at 87°F and 86% relative humidity. After 7 days of operation, ice in form of droplets was present at top of freezer compartment; ice was also present on bottom plate of same compartment and on ice cream cartons where water had dripped and frozen. Maximum air temperature in freezer space during defrosting, 62.4. Length of defrosting cycle, 13 min. **2**

### Refrigerator-Freezer Combination

This kind of unit has separate compartments for freezing and storage, but, unlike refrigerators with across-the-top freezing compartments, the compartments are well insulated from each other and each has its own temperature control, so that the temperature of the freezer space is not limited by the temperature found convenient or desirable for food storage. Such appliances are capable of maintaining 0° in the freezer (which is a desirable low temperature) and 35 to 45° in

the storage compartment. The low temperature in the freezer space is achieved only by the use of a great deal more electrical energy than a refrigerator which maintains its freezer space at say 10 to 15°. Operating cost of the box using the separately controlled freezer and food storage spaces will, on this account, be high (about twice as high as for the better standard refrigerators); purchase of this type of appliance is recommended only for those who can buy electrical energy at a very low price, or those who in other locations can make full and effective use of the freezer space. The refrigerator-freezer combination is not considered a good investment for those who have a separate freezer of sufficient capacity.

### C. Not Recommended

**Hotpoint, Model EG-87** (Hotpoint Inc., Chicago) \$467.

#### Dimensions:

63 $\frac{1}{4}$  in. high, 29 $\frac{1}{4}$  in. wide, 28 in. deep. Total rated capacity, 8.7 cu. ft. (actual, 8.5 cu. ft.). Rated shelf area, 14.48 sq. ft. (actual, 13.6 sq. ft.). Frozen food storage space, 1.5 cu. ft.

#### Description:

Combination refrigerator-freezer, 2 doors. Had two refrigerant-circulating systems, separately controlled for temperature. Secondary system cools general storage space, and is itself cooled by the primary (freezer compartment) system which is connected to the motor-compressor unit. Butter conditioner located in door of storage compartment. 3 ice-cube trays (total, 5.6 lb., 48 cubes). No automatic defrost.

#### Performance in test:

Time required to lower temperature from 110°F to 46°F, 2.19 hr. (0.26 hr. per cu. ft.) (very good). In no-load test at 90° room temperature with control set to give 43° in storage section and freezer control set at normal position as recommended by manufacturer, average air temperature in freezer was 3.9° (lowest of the appliances in this group of tests). Percent running time, 39.7 (high). Cost of operation per month, \$2.24 (26.4c per cu. ft.), high, see text. Maximum time required to make 5.6 lb. of ice cubes, 2.4 hr. (0.4 hr. per lb.), very good. Some sweating of cabinet at 85° and 84% relative humidity. Considerable sweating at 87° and 92% relative humidity. This combination refrigerator-freezer failed to pass the proof-voltage test; had it passed this test, it would have been rated *A*. Recommended for those who can make good use of the small (1 $\frac{1}{2}$  cu. ft.) amount of freezer space held at a desirably low temperature, and would not object to the relatively high cost of operation per cu. ft. of refrigerator and freezer space provided. **3**

## Filtron Coffee Extractor

PEOPLE who are fond of coffee are always interested in a new and better or easier method of preparing it. A device recently offered with the claim of improving the coffee-making process is a cold-water extractor called the *Filtron*. *Filtron* is not a coffee maker; it makes a *liquid extract of coffee* that is added to hot water to make coffee. Directions call for adding one ounce of the extract (more or less, depending on taste) to a cup of hot water for each cup of coffee.

The *Filtron* is a somewhat bulky appliance, but it is easy to use. One pound of coffee (regular grind) and five pints of cold water are used in it to yield about 40 ounces of extract, which is enough to make 40 five-ounce cups of coffee at the recommended strength. The device operates without heat or electricity. The cold water is put in the top bowl and allowed to drip through the filter in the center bowl which holds the coffee. After 9 to 12 hours the stopper at the bottom of the center section is removed and the extract allowed to drain into the bottom bowl. The extract should be stored in the refrigerator until ready for use.

In a taste test made by one of CR's coffee experts, the beverage made from the *Filtron* extract was tested against coffee made in a conventional way from ground coffee, and also against a beverage made with a commercial coffee extract from the same roast. The *Filtron* extract was judged to make a beverage equal to that made from the commercial extract in flavor and aroma, though it was not so strong. In the expert's opinion, the *Filtron* beverage had a better taste than that made from most soluble coffees. The beverage made from the *Filtron* extract — like that made from other extracts or soluble coffees — was not comparable in flavor or aroma to coffee made by any of several approved methods from freshly roasted and ground coffee.

The makers of *Filtron*, it should be noted, invite consumers to ask their physicians to get a chemical analysis of coffee made with the *Filtron* extract and claim that "many doctors permit its use by diet patients formerly forbidden the use of coffee." This claim if limited to *some* diet



*The Filtron partly assembled.*

patients would, we believe, be a reasonable one.

The *Filtron* appliance has the advantage that it allows the consumer to make an extract from his favorite brand of coffee, and the further advantage that, since measurement is easier and more accurate with an extract than with a "soluble coffee," it is easier to get the same quality each time coffee is made. Furthermore, as is the case with all soluble coffees and extracts, the beverage can easily be made in strengths to suit individual tastes.

A cup of coffee made from *Filtron* extract is not any cheaper than a cup of coffee made in one of the more conventional ways. It costs about 2 to 2½ cents per cup, depending on the strength desired, as does a cup of coffee made in the ordinary way. It is possible, however, to make with *Filtron* extract the exact number of cups needed at any one time so there will be no reason to have leftover coffee to be thrown away. Beverage made from the *Filtron* extract, of course, is clear, and there are no residues or grounds to worry about. The felt pad of the device would

need to be well cleaned and then thoroughly dried (or else stored under water in the refrigerator). Just as insurance against the possibility that the plastic filter might become moldy, pains should be taken to dry the filter thoroughly and store in a dry place, exposed to the air.

There remains, however, the question of whether the consumer likes the coffee beverage made from an extract. The consumer can test himself in that respect by use for a time of one of the commercial coffee extracts or one of the soluble coffees (preferably a coffee extract without added carbohydrate, such as *Borden's Instant*

*Coffee*), to see whether he would be interested in investing in a *Filtron* at \$19.50.

#### B. Intermediate

*Filtron* (Helmco-Lacy, 1215 W. Fullerton Ave., Chicago 14) \$19.50. Extraction time, about 12 hours. Made 40 oz. of extract from 1 lb. coffee (regular grind) and 5 pt. of cold water. The appliance would need to be cleaned very carefully after each use. The *Filtron* was pretty bulky and might present a storage problem; it measured about 13 in. high and 12 in. in diameter, including handles, which is a good deal larger than most coffee makers (percolator, drip, or *Silex* type).

## Off the Editor's Chest

(Continued from page 2)

Company that they made an effort to maintain repair facilities on their blankets for several years after they ceased to have it manufactured. On the other hand, if the Simmons name remained attached to the blankets or if dealers represented the blankets orally as a Simmons product after the manufacturer had turned over the entire stock to the jobber it would certainly have given a false picture of the product's relationship to its manufacturer to consumers who were accustomed to seeing the famous Simmons *Beautyrest* mattresses and other products in thousands of home furnishings stores throughout the country. Those to whom the prestige and standing of a name were a major factor in determining what brand they purchased, would undoubtedly be misled by such a practice. It would certainly be in order in any such case for a manufacturer to label his product as a "discontinued model" at the very least. The Simmons warranty covered one year, which is a short and expensive life for an electric blanket considering its original selling price of \$41.75, particularly if, after a year or two of operation, it were necessary to spend \$10 to \$12 getting it converted to a new design or turned in on a different make. This mistake in design was a costly guinea pig experiment and no doubt consumers who had difficulties with the Simmons blanket will be extremely skeptical of the Brand Names Foundations' propaganda for its clients, that you can always be sure of quality if you buy a product with an established name.

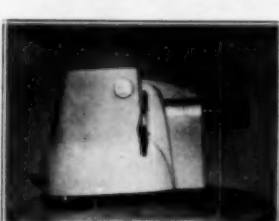
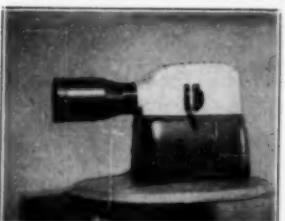
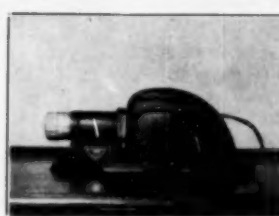
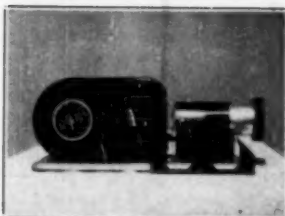
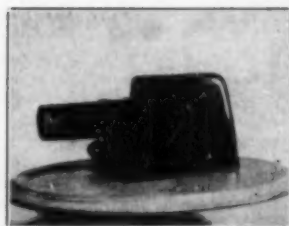
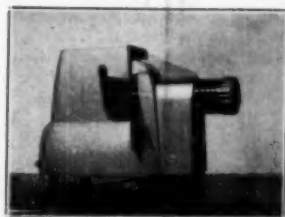
Much more considerably handled was replacement of defective automobile radiators in a number of General Motors cars reported in *The Consumers' Observation Post*, March 1952. In order to conserve scarce metals, a coated steel radiator tank was put into a great number of

cars; these radiators developed serious difficulties shortly after they were put into service. Although a number of consumers no doubt felt that they were not entirely compensated for their difficulties, General Motors has replaced the steel tanks with tanks made of brass, free of charge. In this particular case General Motors took responsibility for maintaining the quality of the product associated with its name, and accepted full responsibility for the error of judgment of its engineers.

Still another case was the subject of a speech by an executive of the Parker Pen Company, in the spring of 1952, in which he announced the results of research and development of a pocket size camera for amateur photographers and, at the same time, abandonment of plans to produce and market it. The camera was to be about the dimensions of a "king-size" package of cigarettes and embodied the principle of providing a longer focal length by the use of a mirror. From the consumer's point of view, there were two obstacles that the company could not overcome. First, the distribution of the odd-sized film required seemed almost impossible to accomplish on a world-wide basis; and second, the selling price of the camera would have been well over \$20. After three years of research, and production of a pilot run of 50 cameras, the company scrapped the project.

It isn't possible to draw sweeping conclusions that a well-known brand is necessarily the consumer's guarantee of a high-quality product. Sometimes it is an important safeguard to assure at least reasonable quality, but it all depends on the sense of public responsibility of the company's management, and not at all on the volume or character of its advertising.





**Top Row:** TDC Streamliner 500, TDC Mainliner 300, Kodaslide Meril.

**Middle Row:** Spartus, Vu-Aid Color Master, Baby Zell.

**Bottom Row:** Kodaslide Master, TDC Streamliner Duo 500, TDC Projector-View.

## Slide Projectors

THE January 1952 CONSUMERS' RESEARCH BULLETIN contained listings of eight projectors for 2 x 2 in. slides and two projectors for 2 3/4 x 2 3/4 in. slides. Since that time, eight additional projectors for 2 x 2 in. slides and two combination projectors which take both 2 x 2 in. and 2 3/4 x 2 3/4 in. slides have been tested and the results are presented herewith.

Beaded glass screens which are in wide use for

projection of color transparencies are not so satisfactory as screens with a dead flat white surface. While beaded screens give a brighter image than flat white screens for those seated directly in front of the screen, they give a much duller image for those who sitting off to one side must view the screen at an angle greater than about 28° from the line of projection. The image on a beaded screen is less sharp, too, than that on a flat white screen.

## Projectors for 2 x 2 in. Slides

### B. Intermediate

*TDC Mainliner 300* (Three Dimension Co.) \$58.50, plus \$9.50 for case. Lens, *f*/3.5 coated *Tridar* anastigmat of 5-in. focal length. Focused by rotation of lens in helical mount. Equipped with 300-watt bulb, double condenser, heat-absorbing glass plate, and fan for cooling. Resolving power of lens, good. Light output, good, but evenness of illumination below average. Adequate cooling. If evenness of illumination were improved, this projector would warrant an *A* rating. **2**

*TDC Project-or-View* (Three Dimension Co.) \$84.50. Coated lens of approximately 3-in. focal length, focused by knurled nut. Equipped with 200-watt bulb, double condensers, and fan for cooling. Projects either on usual separate screen or on built-in ground glass, 6¼ in. square. Lens resolution, light output, and evenness of illumination, only fair. Cooling was adequate. For use of the projector as a table viewer, the rating would be *A*. *Recommended.* **3**

*TDC Streamliner 500* (Three Dimension Co., 4555 W. Addison St., Chicago 41) \$84.50. Lens, *f*/3.5 coated *Trionar* of 5-in. focal length. Focused by rotation of

lens in helical mount. Equipped with 500-watt bulb, double condenser, heat-absorbing glass plate, and fan for cooling. Resolving power of lens, fair (not so good as that of lens on *TDC Mainliner 300*). Light output, good. Evenness of illumination, only fair. Adequate cooling. **3**

### C. Not Recommended

*Kodaslide Merit* (Eastman Kodak Co., Rochester 4, N.Y.) \$26. Lens, *f*/3.5 coated *Projection Ektanon* of 5-in. focal length. Equipped with 150-watt bulb and single condenser, but no heat-absorbing glass, or means for centering bulb. Resolving power of lens, only fair, and had considerable color fringing. Light output, below average. Illumination, noticeably uneven; upper corners of screen showed dark spaces. Had no separate slide carrier; design provided for slides to be fed into an opening at top of projector and each slide was displaced by the next slide. Judged inconvenient to operate. Temperature of slide after only 2 minutes of operation, 220°F (much too high). **1**

*Spartus, Model I SP 700* (Herold Mfg. Co., 715 W. Lake St., Chicago) \$14.95. Lens not marked, but judged to be a simple double convex or plano-convex of about

Table I

	Watts	Average Foot Candles	Average Foot Candles per 100 Watts	Light Output (Lumens on Screen)	Corner to Center Ratio <sup>1</sup>	Resolution of Lens in Lines per mm. on Slide		Temperature of Slide, °F	Rating
						Center	Edges		
<i>Spartus</i>	100	17	17	132	93 (47)	40	0	220	C
<i>Vu-Aid</i>	100	7	7	55	50 (43)	28	10	191	C
<i>Baby Zell</i>	100	25	25	185	66 (57)	80	56	220+	C
<i>Kodaslide Merit</i>	150	15	10	117	113 (131)	40	28	220+	C
<i>TDC Project-or-View</i>	200	26.2	11.5	200	83 (62)	56	20	127	B
<i>TDC Mainliner 300</i>	300	60	20	445	61 (47)	80	40	154	B
<i>TDC Streamliner 500</i>	500	74	14.8	660	74 (62)	56	40	132	B
<i>Kodaslide Master</i>	1000	324	32.4	2523	64 (62)	56	28	220	C
<i>TDC Duo 300</i> <sup>2</sup>	300	58	19.3	645	32 (28)	80	28	125	C
<i>TDC Duo 500</i> <sup>2</sup>	500	158	32	1750	45 (38)	80	56	142	B

<sup>1</sup>First figure by A.S.A. method — average illumination of four corner points divided by illumination in center, times 100. The second figure, in parentheses, which, in C.R.'s opinion, gives a value more fairly reflecting the unevenness of illumination of the slide, is illumination of the corner with the poorest illumination divided by illumination in center, times 100.

<sup>2</sup>Tested only with 2½ x 2½ slides.

f/3.5 aperture. Equipped with 100-watt spherical bulb and single condenser lens. Focused by moving lens tube in a larger tube (in which it was a poor fit). Lens performance, very poor. Considerable color fringing. Overheated badly. 1

**Vu-Aid Color Master** (Vu-Aid, Ann Arbor, Mich.) \$7.50. Lens not marked, but appeared to be a simple double convex lens similar to those used in cheap magnifying glasses and advertised as f/3.5 of 4-in. focal length. Equipped with 100-watt spherical bulb, single condenser lens. Lens performance, very poor (lens was loose in tube). Extremely bad color fringing. Overheated badly. Except for its fault of overheating (which the manufacturer could correct), this projector would be considered a more satisfactory way of looking at 35 mm. slides than a hand viewer (selling for \$1 to \$8), as it would permit a small group rather than one person only to view the image projected on a small screen. 1

**Baby Zett** (Made by Voigtlander, Germany; distributed by Willoughby's, 110 W. 32 St., New York 1) \$76.50. Lens, f/2.5 coated *Projektor* of 80-mm. focal length, focused by rotation of helical mount. Equipped with 100-watt bulb and triple condenser; no heat-absorbing glass. Means were provided for centering bulb horizontally (desirable). Resolving power of lens, very good. Light output, very good for 100-watt bulb. Evenness of illumination, poor. Temperature of slide, much too high. 3

**Kodaslide Master Model** (Eastman Kodak Co.) \$246, with f/2.3 coated *Projection Ektar* lens of 7½-in. focal length, focused by rotation of helical mount. Equipped with 1000-watt bulb, fully coated double condenser, heat-absorbing glass, and fan for cooling. Means were provided for centering bulb horizontally (desirable). Resolving power of lens, only fair; had considerable color fringing and some curvature of

field. Light output, very good, but evenness of illumination was poor. Temperature of slide after less than 2 minutes of operation, 220°F (much too high). This projector is available also with other lenses at prices of \$169, \$179, and \$236. These models, however, were not tested. 3

## Combination Projectors for 2 x 2 in. and 2-3/4 x 2-3/4 in. Slides

### B. Intermediate

**TDC Streamliner 500 Duo** (Three Dimension Co.) \$89.50. Lens, f/3.5 *Trionar* (not coated) of 6-in. focal length. Focused by rotation of lens in helical mount. Equipped with 500-watt bulb, triple condensers, heat-absorbing glass, and fan for cooling. Had separate slide carriers for 2 x 2 in. and 2¾ x 2¾ in. slides (desirable). Resolving power of lens, very good. Light output, very good. Evenness of illumination when projecting large slides, poor (corners were dark). Adequate cooling. If evenness of illumination were improved, an A rating would be warranted. 3

### C. Not Recommended

**TDC Streamliner 300 Duo** (Three Dimension Co.) \$69.50. Lens, f/3.5 *Trionar* coated lens of 5-in. focal length. Focused by rotation of lens in helical mount. Equipped with 300-watt bulb, triple condensers, heat-absorbing glass, and fan for cooling. Had separate slide carriers for 2 x 2 in. and 2¾ x 2¾ in. slides (desirable). Resolving power of lens, fair. Light output, good. Evenness of illumination when projecting large slides, poor (corners were dark). Adequate cooling. 2

## Corrections and Emendations to Consumers' Research

### Annual Cumulative Bulletin (ACB) and Monthly Bulletins

Egg Beaters  
Page 13  
June '52 Bulletin

**Maynard No. 77 Speed Mixer.** The price paid for this mixer was \$2.95, but according to the manufacturer's price list, the correct current retail price is \$3.95.

Electric Food Mixers  
Pages 9-10  
Jan. '51 Bulletin

In the listing of **Kitchen Aid Model 3B**, delete statement, "Some shock hazard present on both samples tested." The greater

part of the stated 1.2 ma. leakage current was found to be unusual in that it was alternating current at a sufficiently high frequency that it appeared not to involve the hazard of shock

to the user that current at lower frequency does. The rating should be changed from *B. Intermediate* to *A. Recommended*.

In the listing of the **Gilbert Type B29**, delete the statement, "Some shock hazard present; leakage current, 0.8 ma." The greater part of this leakage current was also alternating current of high frequency. (The rating is not changed.)

Electric Food Mixers  
Page 32  
ACB '52-'53

The rating of the **Kitchen Aid Model 3B** should be changed from *B. Intermediate* to *A. Recommended*.

## An "Acid Neutralizer"

WITHIN the last few months, a surprisingly large number of subscribers have written to CR requesting information regarding the "Magna-Power acid neutralizer," a device alleged to help the consumer get more power, more speed, and longer life from his car; indeed, a life expectancy of at least 300,000 miles is claimed, without need for overhauling, and it is even hinted that 600,000 miles is a possibility. The advertising literature for this product is rather ingeniously prepared to persuade the consumer that it is a substantial and scientifically developed product. The leaflet is signed by W. A. Johns, Mechanical Engineer; Mr. W. A. Johns is also president of the Johns Manufacturing Co., Dunellen, N.J., promoters of the *Magna-Power* device. *Magna-Power* consists of a plug which is substituted for the regular screw plug in the bottom of the oil pan of the car; mounted on the plug is a cylindrical piece of magnesium-aluminum alloy; this in the one tested was about  $\frac{3}{8}$  inch in diameter and  $\frac{3}{4}$  inch long (1 $\frac{1}{2}$  inches overall, including the screw cap).

The advertising is like that for many automotive specialties; no actual specific provable claims are made. "...you can get more power than new—10 or 15% more" and "an engine protected from acid will amaze you with its incredible pull and snap"; "My Hudson with 20,000 miles on it will now go well over 100 miles per hour."

In order to impress the reader, if he is not already convinced, several testimonials are included which should leave no doubt in one's mind, since these claim better gas mileage, cleaner oil, excellent "get-away" power, longer life of the internal moving parts of an engine, and several other advantages. These are the usual testimonials from non-expert users, but as with the oil additives discussed in our September 1951 BULLETIN, no reports from an independent automotive, mechanical, or chemical engineering laboratory of competence and standing are submitted to support the rather vague and general claims of the advertising literature and its testimonials.

The general theme of the appeal to the reader is on the ground that there are destructive acids



*Magna-Power Acid Neutralizer*

produced in an engine, which does happen; that in 1000 gallons of gasoline, enough for 15,000 to 20,000 miles of driving, there are about six pounds of sulfur, enough to make 55 pounds, or "about 5 gallons of good strong sulfuric acid." In addition, substantial amounts of other corrosive acids are formed. The pamphlet goes on to explain that while most of the acid passes out with crankcase ventilation, a "small amount" of acid is left to do the damage; it plainly implies that a substantial amount does remain to damage and shorten the life of the engine. (There was no reason to bring in the statement about "55 pounds or 5 gallons of good strong sulfuric acid" except to plant in the reader's mind the idea that large amounts of this strong and destructive acid are formed, to menace the engine and its parts.) Getting rid of the acids by means of the *Magna-Power* is supposed to dispose of gums, sludge, or resins, or make them more readily dissolved by the solvent additives in the oil, and to reduce the carbon deposits, ring sticking, and spark plug fouling.

Since the advertising of this product has been convincing to a number of our readers, a *Magna-Power* plug, purchased by mail for Consumers' Research, was subjected to a number of tests. Weight loss (or gain) of the plug was determined after it was in contact with an iron plate for eight hours in five quarts of used crankcase oil, maintained at a temperature of 180°F. A sample of the oil was then also analyzed for total sulfur in order to determine the decrease, if any, in sulfur content due to the presence of *Magna-Power* (a measure of the decrease in the sulfuric acid present). This procedure was repeated with the oil at room temperature for an additional 15 hours and at 180°F for the next eight hours. The plug was again weighed and the oil analyzed for sulfur. *There was no change in the weight of the plug nor any significant reduction in the total sulfur content of the oil.* The plug was put back for the next 8 hours into the 180° oil, to which ten drops of sulfuric acid had been

added. Throughout each test in hot oil, the oil was constantly stirred. Even with sulfuric acid added *Magna-Power* showed no significant effect in neutralizing any of the acid, as determined by the amount of sulfur present on analysis of the oil or by change in weight of the plug.

The basic causes of engine wear may be classified as chemical (corrosion by acids), wear by abrasive particles, and mechanical wear. On the basis of many hundreds of analyses of used crankcase oil and hundreds of bearing inspections, it can be stated that inorganic acids are not a problem of any practical magnitude, and that bearing failures due to corrosion are a rarity. Much of the wear in an engine is caused by the abrasive action of the substantial amount of dirt that gets into the oil and by mechanical rubbing of parts, but the *Magna-Power* plug will not affect either of these causes of wear. One may conclude from the experiments that *Magna-Power* is not of significant value in preserving engines and increasing engine life, for it does not effectively neutralize either of the kinds of acid that might cause engine corrosion.

A major factor in producing wear of engines is driving for short distances and frequent starting and stopping of the engine. *Magna-Power* will not help significantly with wear from such causes.

### C. Not Recommended

*Magna-Power* (The Johns Mfg. Co., Dunellen, N.J.) \$2.95. Though the promoters of this automotive accessory call it an "acid neutralizer," and claim it will assure "continuous top-performance from your engine" and "can" increase engine life to "at least 300,000 miles" without overhaul, it could, if effective at all, neutralize only mineral acids. These, generated in the space above the pistons, would react with rings, cylinder walls, and pistons (themselves often aluminum and hence like the *Magna-Power* theoretically capable of reacting with the acid), before they reached the bearings in the crankcase. Tests showed that even if some acids reach the crankcase (as may happen when an engine is started frequently, and used on short runs only, particularly in cold weather), the plug will not protect the crankcase oil (since lubricating oil is a very poor electrolyte). The chief causes of wear are not discussed in the *Magna-Power* pamphlet, which discusses wear at great length from the special point of view of selling an "acid-neutralizer." The claimed "field testing" is not supported by the signed reports of qualified professional laboratories carrying out carefully executed test work under controlled conditions. A sample *Magna-Power* installed in the crankcase of CR's station wagon showed no loss in weight nor change in appearance after about 8000 miles of short run driving (frequent starting and stopping). There was, moreover, no noticeable change in the performance of the vehicle (the maker of the *Magna-Power* claimed striking increases of power and acceleration).

## "Reconditioned" Railroad Watches by Mail

CONSUMERS will be well advised to exercise great caution in purchasing any watch on a mail-order basis from a company offering bargains in used or reconditioned watches. Some months ago a consumer sent to a mail-order dealer in new and used watches in Philadelphia (Emas Watch Co., 740 Sansom St.) for a 21-jewel, 16-size reconditioned railroad Waltham watch. This watch was advertised as "16-size, 21 jewel reconditioned railroad — We overbought on these watches and are willing to take a loss to move them. . . . All are outstanding timepieces for they have been completely cleaned, regulated and adjusted. . . . Guaranteed to pass inspection." When this watch was delivered, it was taken at once to a qualified railroad watch inspector, who was asked to go over it to determine whether it was a good movement that had been properly cleaned and reconditioned, and to report on the conditions which he found upon examining the watch. It was found that the

lower pivot of the escape pinion was badly cut, jewels were cracked and a part missing, and repair work had been done in a thoroughly unworkmanlike manner. Replacement parts that had been used were not of the proper kind. A jewel screw was missing, the plate had been marred with file marks, and there were filings in the movement. The watch had not been properly cleaned and oiled and was in no condition to pass railroad inspection, and would not give good or lasting timekeeping performance.

Inasmuch as the watch was not as represented, the purchaser tried to obtain refund of money paid for the watch in question, but the company refused to refund money; they offered only a "credit refund." The question is then reasonably asked: Who would willingly accept a credit toward another watch (instead of refund) from a company that has failed signally to provide a watch that would live up, even approximately, to the claims made for it in its advertising?



## Cleaning Carpets and Rugs

### "On-Location" Cleaners, Including Glamorene

THE modern trend toward using light colors in all rooms in the home has increased the interest of homemakers in the cleaning of carpets and rugs. Light-colored rugs do not soil faster than other rugs of the same materials, but they seem to, and the colors become dulled in a shorter time.

A good home cleaning schedule can postpone the day when the soiling becomes so bad as to require the use of the services of professional rug cleaner. Day-by-day care, using a broom, carpet sweeper, or vacuum cleaner, depending on how much dirt is tracked into a particular room, is generally better than cleaning at less frequent intervals, even if the less frequent cleaning is more thorough. Carpet dirt is much more easily removed soon after it has reached the rug than after it has had a chance to sift down between the tufts, with use of the rug.

In spite of a good cleaning schedule, it may be necessary to have a more thorough cleaning job done every few years. About the best solution is to send the rug for a shampooing to a professional rug cleaner. (You can get the name of a reliable cleaner by writing the National Institute of Rug Cleaners, Silver Spring, Md.) Such cleaning makes it possible to remove more soil than is possible when the cleaning is done "on-location" in your home. The rug will usually be dry-dusted, then shampooed, rinsed, dried, and the nap restored.

If you have wall-to-wall carpeting, you may not wish to have your carpet taken up. Under such circumstances, a professional cleaner may use a liquid foaming cleaner containing synthetic detergents, or a powder. Two well-known foaming products are *Karpet Kare*, which was developed by the Bigelow-Sanford Carpet Co., and *Orrus*, made by the Procter & Gamble Co. The foaming lather is applied to the rug with a scrubbing machine, then sucked up by an indus-

trial type of vacuum cleaner. Use of the foam lessens the chance of soaking the rug; when a rug has been made wet, it will tend to shrink and develop mold. The powder cleaner is likely to be fuller's earth or bentonite clay soaked with one or more dry-cleaning solvents so that it is damp to the touch. This material is spread over the rug to be cleaned, rubbed in with a moderately stiff brush, allowed to dry, and then the rug is vacuum-cleaned. During the time the powder is on the rug, the solvent dissolves greasy matter which is then absorbed into the clay. Generally, such cleaning is not considered so effective as the use of a synthetic-detergent shampoo, for the powder is not so efficient a remover of grease and other spots.

There have been marketed recently a number of products which enable the housewife to do "on-location" carpet cleaning herself. Liquid cleaners of the kind sold for the housewife to use are usually mixtures of synthetic detergents in water; sometimes chemicals called "builders" are also present. The cleaners are diluted with water, sometimes whipped into a foam, then applied to a rug. One product of this kind recently tried by CR is *Glamur*. *Glamur* cleaned and brightened the surfaces of rugs and upholstery and was a fairly good spot remover. It was found effective in removing spots of cooking oil and fats, orange juice, and milk from an all-wool rug in one cleaning. Two cleanings with it removed spots of egg and gravy. Three cleanings removed tomato juice and chocolate, but left spots of car grease, mustard, and coffee (with cream and sugar), and a large, smeared spot of lipstick. Chewing gum was not affected.

The directions for the use of *Glamur* suggested that it need only be wiped off, not rinsed. CR believes that it would be better to try to remove some of the detergent solution and dirt with water; yet care should be taken not to wet the

carpet any more than is really necessary. Liquid cleaners containing soaps should not be used for rug cleaning, for the soap residues make the carpet more susceptible to resoiling than residues of synthetic detergents; besides the soap residues will in time turn rancid and have an unpleasant odor. Soap, too, has an alkaline reaction which may reduce the fastness of the colors on wool.

One product similar to the powder cleaners which has received much publicity lately because of an article in *The Reader's Digest* is *Glamorene*. *Glamorene* does not contain clay but fine sawdust, and has ethyl dichloride or trichloroethylene and heavy naphtha as the dry-cleaning solvents. Water and a small amount of surface-active agent are also present. The product is claimed to have an advantage in that it contains both a dry-cleaning solvent for removing grease stains and a surface-active (synthetic detergent) agent which will help remove water-soluble stains.

CR found that *Glamorene* was easy to use. All that is necessary is to apply the product as directed, permit it to dry, and remove it. It cleaned and brightened the surfaces of rugs and upholstery on which it was used. Further, in trials made on an all-wool rug, *Glamorene* was found to be effective in removing spots of oil and grease, although the oil spots kept recurring several times on carpets as the oil "wicked" up through the carpet pile yarns. *Glamorene* was not found so effective as a spot remover as it was painted by *The Reader's Digest* (which also omitted all mention of the disadvantage of toxicity). Even after *Glamorene* had been used three times on the same stains, faint marks still remained of spots of orange, chocolate, car grease, gravy, and coffee (with cream and sugar); noticeable marks still remained of spots of poached egg, milk, lipstick, shoe polish, tomato juice, mustard, and chewing gum (although the chewing gum itself was removed).

The tests CR made for effectiveness of the products in removing spots and stains were severe, and we would not think it reasonable to expect any product to be fully satisfactory in removing all traces of all the stains applied. Indeed, even an experienced rug cleaner having a wide range of cleaning and solvent materials available would have difficulty with some of the stains. Both *Glamur* and *Glamorene* did what CR regards as a fairly good job of spot removal in the tests.

*Glamorene* is a good grease spot remover on all-wool materials other than carpets and was used in CR's laboratory with success for removing spots of graphite grease from clothing. (The faint grease spot that remained after *Glamorene* had been used had to be removed by a grease-



*Glamorene* is being used here to remove grease spots from strips of test carpeting.

dissolving cleaning solvent or an absorbent powder or chalk.)

The manufacturer warns that *Glamorene* should be used in ventilated rooms and suggests further that opening windows and doors will help quicken drying time. CR would give far more stress to the warning, since the dry-cleaning solvent used is a halogenated hydrocarbon which is highly poisonous upon repeated inhalation or

exposure of the skin, and has a particularly bad effect on the kidneys. It so happens that *Glamorene* does not contain sufficient solvent to require it to carry the special warning label required by the U. S. Public Health Service. (The Service expects manufacturers to apply warning labels to products containing more than 24 percent of trichloroethylene or ethylene dichloride; *Glamorene* contains a little more than 12 percent of one of these.) Nevertheless, the fumes are toxic. One member of a cleaning crew of an airline in the west died from poisoning caused by fumes of a chlorinated hydrocarbon after use of *Glamorene* to clean the upholstery inside a plane. The San Francisco Department of Health issued a warning about the use of *Glamorene* and requested that the product not be sold in the city, but withdrew its objections later when it was found that the unfortunate workman had been using another chlorinated hydrocarbon product previously. (Chlorinated solvents are toxic for single exposures, and especially dangerous where there are repeated exposures.) It appeared likely that the workman may have succumbed because of the cumulative effect of using cleaning materials containing the frequently dangerous chlorinated hydrocarbon

solvents; the last one he used was *Glamorene*.

#### B. Intermediate

*Glamorene* (Jerclaydon, Inc., Miami Beach, Fla.) \$2.29 for ½ gal., \$3.79 for 1 gal. A long-handled rug brush to be used in applying *Glamorene* (helps a little to reduce inhalation hazard) sells for \$1.24. Cleaned and brightened the surface of rugs and was a good grease remover. Failed to remove or lighten many water-soluble stains. According to one analysis, was principally sawdust (26%), ethylene dichloride (12%), heavy naphtha (20%), water (42%), and a small amount of synthetic detergent. Another analysis showed trichloroethylene instead of ethylene dichloride, indicating a variation in composition of the product. (Both substances are quite objectionable, as already noted, from the standpoint of toxicity, if the cleaning mixture is not very carefully used.) Has a strong odor of the chlorinated solvent. *Glamur* (The Hosid Products, Inc., Hosid Bldg., Syracuse 3) 89c for 8-oz. bottle. Directions call for mixing 1 part *Glamur* to 8 parts water. Cleaned and brightened soiled surfaces and was a good grease remover, but did not effectively remove a heavy grease stain. Removed or lightened many water-soluble stains, in which respect it was more effective than *Glamorene*. Principally water (95%) and synthetic detergent (5%). This product did not involve any toxicity hazard so far as is known.

## A Poisoning Hazard in Radio and TV Sets — Selenium Rectifiers

IT IS increasingly common practice in modern television sets and radio receivers to use selenium rectifiers to provide the high voltage direct current required in a number of parts of radio and television circuits, instead of the vacuum-tube rectifiers that were formerly used exclusively in this application. The selenium rectifiers are attractive to manufacturers from a cost-of-parts standpoint compared with the vacuum-tube rectifier system; fortunately, however, the trend toward selenium rectifiers is still in its beginning stages, and there are reasons for hoping that they may not be universally adopted in radio and television circuits. The selenium rectifier has the serious disadvantage that when it burns out, as it will occasionally, fumes of selenium dioxide are given off. This, which has an over-

powering stench similar to that from a sewage system, is extremely poisonous and should not be breathed even for a short time. Anyone near by should leave the house immediately and get into the fresh air, and the room should be promptly and thoroughly ventilated. The equipment with the burned-out unit should be taken out of doors as soon as possible.

It is important not to handle the damaged rectifier with the fingers for two reasons: first, that toxic selenium compounds may be transferred to the skin and thence to the mouth; second, because some of the selenium may be absorbed through a burned spot on the skin. Selenium dioxide can cause burns even when cold, and in this way be absorbed through the skin.

Precautions against rectifier burn out that can

be taken by the manufacturer are: a proper fuse in the d.c. output circuit, and a corresponding fuse in the a.c. input circuit. There are at least eight other provisions, some more complex, to delay rectifier burn out, which manufacturers will know about through information made available in technical literature, including especially careful design of associated circuits, and avoidance of mounting a selenium rectifier in a hot area of the chassis. However, one trade source notes that all rectifiers may be expected to burn out ultimately, so that the problem is

evidently one of considerable practical importance both to servicemen and to consumers.

The extreme toxicity of selenium may be judged from the fact that the maximum allowable concentration in the air for an appreciable period of exposure has been set at *one-tenth of a part per million*. Where selenium compounds are handled in industry, good practice requires that extreme precautions shall be taken to avoid contact with persons, and to prevent smoking and eating, or storage of food materials, in the area where the poisonous material is employed.

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## The Mile-O-Meter

THE short article entitled "The Mile-O-Meter and Other Motor Tune-Up Gauges" which appeared in CONSUMERS' RESEARCH BULLETIN for April 1952 was of sufficient interest to subscribers that we thought it worth while to subject the *Mile-O-Meter* to tests of actual comparison of the device on the road with true miles-per-gallon determinations. The *Mile-O-Meter* was chosen for this additional test work because it is widely advertised to the general public and is claimed by its manufacturer in advertisements to "faithfully register miles per gallon at every speed and driving condition." In recent advertising, an additional claim is made that the *Mile-O-Meter* "translates" the intake manifold vacuum "into a certified-accurate indication of miles-per gallon fuel consumption and motor condition." This, if true, would make it a useful instrument for technical men and other specially interested drivers. In order that the sample would assuredly be representative of current production, the unit used in the tests herein reported was purchased just before the tests by mail, directly from the promoter of the device, Gale Hall Engineering, Inc.

The test procedures were set up so that the readings on the *Mile-O-Meter* could be checked against actual measured fuel consumption under driving conditions. The tests were made at several speeds of 9 to 55 miles per hour on level, uphill, and downhill stretches of highway. Simultaneous readings of speed, manifold vacuum, and the time to consume measured amounts of fuel were taken when steady running conditions had been attained.

The *Mile-O-Meter* has two "relative miles-per-gallon scales" on its dial, and claims that the scale reading from 1 to 35 "is the miles-per-gallon on vehicles of 80 horsepower or over" and that the scale "reading from 0 to 85 is the miles per gallon scale for any vehicle under 80 h.p." Two automobiles were therefore used for the tests, a 1951 4-cylinder *Henry J* rated at 68 hp. and a 1951 6-cylinder *De Soto* rated at 116 hp.

Using the *De Soto* as the test car, the *Mile-O-Meter* indicated 4 miles per gallon when almost 8 miles per gallon was the actual figure attained at high speed when ascending a hill. In other instances, the *Mile-O-Meter* indicated 18 miles

per gallon in several test runs in which the actual miles per gallon varied from 22 to 27 m.p.g. The errors in the indications of the *Mile-O-Meter* were even greater when the 68-hp. *Henry J* was used for the test; 12 m.p.g. was shown on the *Mile-O-Meter* when the actual miles-per-gallon figure was 27 m.p.g., and the other results showed differences of the same order in the more than 25 test runs that were made on this car.

The engineers' conclusion from the test results was that there was no useful or practical relationship between the readings of the *Mile-O-Meter* and the fuel consumption as actually measured under the practical driving conditions of the test. This would bear out the conclusions that would be reached by any qualified automotive engineer on the basis of gasoline engine theory and automobile power requirements.

It is interesting that the *Mile-O-Meter* carries, to the observing user, its own refutation of the most important advertising claims which are made. There is one scale reading from 1 to 35 which is alleged to be the "miles-per-gallon on vehicles of 80 horsepower or over." There is another scale reading from 1 to 85 which is said to be the "miles per gallon scale for any vehicle under 80 h.p." It will be obvious that for similar or comparable engines there would not be a sudden jump in gasoline consumption such as is contemplated by this scaling arrangement in shifting, for example, from a car of 79 horsepower to one of 80 horsepower, or from one of 75 to one of 85 horsepower. To show the impossibility of the instrument's being correct, consider the case of a 79-horsepower engine giving a reading of 34 miles per gallon. An engine giving only one more horsepower output would for the same position of the meter hand have a performance of only 24 miles per gallon. Likewise, according to the *Mile-O-Meter*, you could have a miles per gallon of 20 for an 80-horsepower engine, and with the same position of the hand, a miles per gallon of 28 for a 79-horsepower engine. Such indicated differences in performance are manifestly absurd, and convincing evidence that the degree of approximation afforded by the use of this device is a very crude one indeed.



## Fluoridation

SEVERAL points unfavorable to the fluoridation of public water supplies, at the present time, are made in a report prepared by the Special Committee on Fluoridation of the New Jersey Section, American Water Works Association, and made available to CR by Mr. O. A. Gierlich, Chairman of the Committee on Fluoridation, Southern California Water Works Organization, and Water Engineer of City of Manhattan Beach, Calif., who is himself in entire accord with the statement. The following is an excerpt, condensed in part, from the committee's recommendations.

Authoritative sources have publicly cautioned against a premature promotion or adoption of artificial fluoridation until such time that adequate and convincing evidence has been presented.

J.L.T. Appleton, Dean, School of Dentistry, University of Pennsylvania, has succinctly presented this note of warning by stating that "the case with which a communal water supply can be made a vehicle for the administration of all sorts of chemicals to the consumer holds out great promise, but it also invites trouble. Public health workers and water works engineers and administrators have a grave responsibility which extends far beyond any good or evil that may come from fluoridation of the water supplies — namely, the responsibility of acting only on adequate and convincing evidence. Any present judgment of the value and safety of this method is tentative. Therefore, to advocate it, except as an experiment is premature and economically a gamble."

### "Frame-Up" for putting up storm windows and screens

*Frame-Up* (\$1.98 from Household Gadgets, Inc., 41 Broad St., New York 4) is a simple metal tong-like gripping device about a foot long with jaws covered with soft rubber tubing. A short rope with a locking sleeve is attached to the handles. *Frame-Up* grips storm windows or screens and permits them to be lowered to the ground from an upper floor, or raised from the ground, by means of a rope. If the windows are to be lifted to an upper floor, an assistant on the ground is needed to place and "lock" the *Frame-Up* device, but when a window or screen has

The New Jersey State Department of Health should neither promote nor discourage communities from starting the treatment, pending definite statements regarding the results of experimental studies hereinafter recommended; and after completion of experiments being conducted elsewhere in the United States.

That if, however, the treatment is desired by a community, the State Health Department should insist that it be carried out under the supervision of competent and well-trained technical water plant operational personnel specially licensed by the State Department of Health.

That all of the following conditions (and a number of others) should have been met before the Health Department will favorably consider approval of fluoridation for any community:

- a. that the fluoridation has been requested by the local medical and dental associations.
- b. request legally agreed upon by the municipalities affected.
- c. satisfactory arrangements provided for overall costs and financing of such treatment.
- d. all State Health Department requirements met.

That the State Department of Health undertake studies and experiments on the effects of the addition of fluorides, with careful study as to possible deleterious systemic effects.

That it be determined who will be legally responsible for real or alleged damage or losses to persons, material, or industrial processes due to fluoridation.

been lowered to the ground, the user can unfasten it by slacking and swinging the rope.

CR found that *Frame-Up* could support safely a weight of 50 pounds (about twice the weight of an ordinary storm window) when it was tightly clamped on a piece of one-inch thick, smooth dry wood. The householder must bear in mind that both the rubber jaws and the rope of the *Frame-Up* device may deteriorate with time and abuse and so reduce the load that may be safely handled.

## A Longer Life for Your House

**I**F you are building a new house, or maintaining one that is already built, or are facing the problem of repair or replacement of parts of the structure near the ground, it would be in order to obtain Farmers' Bulletin No. 1993, U.S. Department of Agriculture, 1951 revision, entitled Decay and Termite Damage in Houses. This contains 26 pages of useful information with interesting and informative diagrams and photographs; it is supplied by the Superintendent of Documents, U.S. Government Printing Office, Washington 25, D.C.

Various vital home builders' problems, such as the prevention of termite infestation and fungus growth (commonly known as "dry rot"), and the stopping of decay, are discussed, and preventive measures suggested. Informative photographs show some of the causes and evidences of damage which indicate what to look for when examining a house for termites or fungi.

There is a section dealing with the basic requirements for protection under the heading of General Safeguards which includes parts devoted to Use of Dry Lumber, Protection Against Rain, Naturally Decay-Resistant Wood, and Paint and Preservatives. Another section advises How to Safeguard Woodwork Close to the Ground with discussions on Drainage, Contact of Wood With Soil, Contact of Wood With Concrete or Mason-

ry, Ventilation, Sanitation, and Termiteproof Foundations. The next section, How to Safeguard Parts of Houses Exposed to Rain, deals with problems and improvements of different parts of houses in separate subsections, Porches and Steps, Windows and Doors, Walls, and Roofs. Some brief but valuable comments on the correct use of plywood are given in the section entitled Using New Types of Building Material. The last section contains information on Care of Houses with subtitles, Maintenance, Stopping Termites, Stopping Ordinary Decay, and Stopping "Dry Rot."

Stopping Termites includes a discussion on chemicals used to stop termites. Emphatic cautions about the use of toxic chemicals are included in the discussion. Various suggestions are given in the application of these poisons so that they can be used effectively and with safety. In the discussion, a basic procedure for applying these chemicals is set forth with variations in detail for different sets of conditions. Following this is a list of substances used for poisoning the soil, with dosage applications per 10 linear feet.

Throughout the pamphlet are clear diagrams and reproductions of photographs illustrating evidences of infestation and damage, and poor and good practices in building details, e.g., garage doors, porch posts, wood posts on basement floors, and other topics.

## Testing, and the Ethics of Those Who Work at It

**F**IFTY YEARS AGO one of the pioneers in the testing of products (Paul Kreuzpointner, Engineer of Tests, Pennsylvania Railroad) wrote regarding the ethical principles underlying the testing process, words which are as true and relevant today as they were in 1902: "... In work requiring purely mechanical skill, the result can be measured by rule and compass, and these are tangible quantities. In testing, however, the results may be accepted in good faith, and the man's integrity becomes a leading factor of the

*reliability of the work performed* (emphasis added by CR), because no one can measure or caliper the result. Thus, clearly, testing is largely a question of man's ethics. However scientifically correct and commercially acceptable specifications may be, their intrinsic value to the consumer is largely determined by the degree of reliability with which the final work of testing is performed. "... no amount of mechanical or automatic devices will make up for any possible absence of ethics from a testing room."

# Ratings of Motion Pictures

THIS section aims to give critical consumers a digest of opinion from a wide range of motion picture reviews, including the motion picture trade press, leading newspapers and magazines — some 19 different periodicals in all. The motion picture ratings which follow thus do not represent the judgment of a single person, but are based on an analysis of critics' reviews.

The sources of the reviews are:

Box Office, Cae, Daily News (N.Y.), The Exhibitor, Harrison's Reports, Joint Estimates of Current Motion Pictures, Motion Picture Herald, National Legion of Decency List, Newsweek, New York Herald Tribune, New York Times, New York World-Telegram & Sun, Parents' Magazine, Release of the D.A.R. Premier Committee, Reviews and Ratings by the Protestant Motion Picture Council, Time, Times Herald (Washington, D.C.), Variety (weekly), Weekly Guide to Selected Motion Pictures (National Board of Review of Motion Pictures, Inc.).

The figures preceding the title of the picture indicate the number of critics who have been judged to rate the film A (recommended), B (intermediate), or C (not recommended) on its entertainment values.

Audience suitability is indicated by "A" for adults, "Y" for young people (14-18), and "C" for children, at the end of each line.

Descriptive abbreviations are as follows:

adv—adventure  
biog—biography  
c—in color (Technicolor, Cinecolor, Trucolor, Magnacolor, Vitacolor, etc.)  
car—cartoon  
com—comedy  
cri—crime and capture of criminals  
doc—documentary  
dr—drama  
fan—fantasy  
hist—founded on historical incidents  
mel—melodrama  
mus—musical  
mys—mystery  
nov—dramatization of a novel  
rom—romance  
sci—science fiction  
soc—social-problem drama  
trav—travelogue  
war—dealing with the lives of people in wartime  
wes—western

A	B	C		
—	8	9	About Face	mus-com-c A
—	4	10	Actors and Sin	dr A
—	3	10	Affair in Trinidad	mel A
—	1	4	Affairs of a Model (Swedish)	dr A
—	3	4	African Treasure	mel AYC
—	2	1	Anna (Italian)	dr A
—	—	4	Anthony of Padua (Italian)	biog AYC
1	12	3	Anything Can Happen	com AYC
—	3	3	Apache Country	wes AYC
1	4	—	Arctic Flight	mel AYC
—	2	1	As You Were	war-com AYC
—	14	2	Atomic City, The	cri-mel AYC
—	1	6	Bad Lord Byron, The (British)	dr A
—	1	6	Bal Tabarin	mus-mel A
—	4	3	Barbed Wire	mus-wes-c AYC
—	8	4	Battle at Apache Pass, The	wes-c AYC
—	—	7	Behind Closed Shutters (Italian)	dr A
—	6	9	Belle of New York, The	mus-com-c AYC
—	13	1	Belles on Their Toes	dr-c AYC
—	3	5	Beware, My Lovely	dr A
3	10	—	Big Sky, The	wes-mel A
—	2	3	Black Hills Ambush	wes AYC
—	—	3	Black Lash, The	wes AYC
—	4	4	Border Saddlemates	wes AYC
—	3	1	Brandy for the Parson (British)	com A
—	3	6	Brave Warrior	hist-dr-c AY
—	3	1	Breakdown	mel A
—	—	6	Brief Rapture (Italian)	cri-mel A

A	B	C		
—	4	7	Brigand, The	adv-c A
—	8	—	Bronco Buster	mel-c AYC
—	—	7	Cage of Gold (British)	mys-mel A
—	7	7	California Conquest	hist-c AYC
—	4	2	Captain Pirate	adv-c A
—	14	2	Captive City, The	cri-mel A
—	8	8	Carbine Williams	biog A
—	4	1	Caribbean	adv-c A
2	4	12	Carrie	dr A
—	7	5	Carson City	wes-mel-c AYC
—	1	2	Casque d'Or (French)	dr A
—	4	13	Clash by Night	dr A
—	1	6	Colorado Sundown	mus-wes AYC
—	1	9	Confidence Girl	cri-mel A
—	6	2	Cripple Creek	mel-c AYC
—	1	2	Danger is a Woman (French)	mel A
—	2	1	David (British)	doc-dr AYC
1	11	4	Deadline — U.S.A.	mel A
—	7	7	Denver & Rio Grande, The	mel-c AYC
—	1	6	Desert Passage	wes A
—	1	5	Desert Pursuit	mel AYC
—	3	—	Devil Makes Three, The	mys-mel A
1	11	4	Diplomatic Courier	mys-mel A
—	3	11	Don't Bother to Knock	soc-dr A
1	8	3	Dreamboat	com A
—	7	2	Duel at Silver Creek, The	wes-c AYC
—	3	3	Edward and Caroline (French)	com A
5	9	3	Encore	dr A
—	2	5	Fabulous Senorita, The	com A
—	11	2	Faithful City, The	dr AYC
—	1	3	Fall of Berlin, The (USSR)	war-dr-c A
—	—	4	Fall of the House of Usher, The (British)	dr A
1	5	2	Fearless Fagan	war-com AYC
—	7	11	Fighter, The	mel A
—	9	5	Flesh and Fury	mel A
—	4	4	Franchise Affair, The (British)	mys-dr A
—	2	5	Francis Goes to West Point	com AYC
—	—	4	Geisha Girl	mel A
1	10	6	Girl in White, The	biog AYC
—	1	14	Glory Alley	dr A
—	4	5	Gobs and Gals	mus-com A
—	—	3	Gold Fever	mel AYC
—	5	11	Half-Breed, The	mus-wes-c A
1	3	1	Happy Time, The	com A
1	11	5	Has Anybody Seen My Gal?	mus-com-c AYC
—	2	4	Here Come the Marines	com A
—	—	3	Hideout, The (British)	cri-mel A
6	9	2	High Noon	wes A
2	12	1	High Treason (British)	mys-mel AYC
—	—	4	Hold That Line	com AYC
—	2	6	Holiday for Sinners	dr A
—	10	4	Hoodlum Empire	cri-mel AYC
—	4	9	I Dream of Jeanie	mus-biog-c AYC
—	5	1	If Moscow Strikes	war-doc AYC
—	3	10	Island of Desire (formerly Saturday Island)	dr-c A
2	13	1	Island Rescue (British)	war-com AYC
11	6	—	Ivanhoe	nov-c AYC
3	11	1	Ivory Hunter (British)	dr-c AYC
—	7	7	Jack and the Beanstalk	com-c YC
—	1	4	Jet Job	mel AYC
1	8	7	Jumping Jacks	war-mus-com AYC

A	B	C				A	B	C				
—	1	4	Junction City	mus-wes	AYC	—	—	11	Red Planet Mars	sci	A	
—	2	8	Jungle Jim in the Forbidden Land	adv-c	AY	—	4	6	Red Snow	war-mel	AYC	
—	2	3	Jungle, The	mel-c	AYC	—	3	3	Roaring City	dr	A	
—	6	8	Just Across the Street	com	A	—	6	1	Rodeo	mel-c	AYC	
1	4	1	Just for You	mus-com-c	A	—	2	5	Rough, Tough West, The	mus-wes	AYC	
—	8	7	Kangaroo	mel-c	A	—	5	4	Sally and Saint Anne	com	AYC	
—	4	1	Kansas Territory	wes-c	AYC	1	4	10	San Francisco Story, The	mel	A	
—	6	6	Katy's Love Affair (British)	dr	A	—	11	6	Scaramouche	adv-c	A	
—	1	3	Kid from Broken Gun, The	wes	AYC	—	3	14	Scarlet Angel	mel-c	A	
—	2	4	Kid Monk Baroni	mel	A	—	1	4	Sea Tiger	cri-mel	A	
—	4	4	Kisenga, Man of Africa (British)	dr-c	A	—	3	2	Secret Flight (British)	war-dr	A	
—	5	9	Lady in the Iron Mask	adv-c	AYC	—	6	9	She's Working Her Way Through College	mus-com-c	A	
—	3	1	Lady with a Lamp, The (British)	biog	AYC	5	12	1	Singin' in the Rain	mus-com-c	AYC	
—	5	3	Last Musketeer, The	mus-wes	AYC	1	8	8	Skirts Ahoy!	mus-com-c	AYC	
—	6	6	Last Train from Bombay	cri-mel	AYC	—	1	2	Sky High	com	AYC	
—	4	2	Latuko	doc-c	A	—	8	8	Sky is Red, The (Italian)	dr	A	
—	3	3	Life of Donizetti, The (Italian)	mus-biog	A	—	3	1	Somebody Loves Me	mus-com-c	A	
—	12	3	Lion and the Horse, The	mel-c	A	1	4	2	Son of Ali Baba	adv-c	A	
—	1	6	Loan Shark	mel	A	—	8	1	Son of Paleface	mus-com-c	A	
—	1	5	Lost in Alaska	com	A	—	3	5	Sound Off	mus-com-c	AYC	
3	6	7	Lovely to Look At	mus-com-c	A	—	3	5	Spider and the Fly, The (British)	mys-mel	A	
—	4	3	Loyola — The Soldier Saint (Spanish)	biog	AYC	—	5	7	Stage to Blue River	wes	AYC	
—	5	2	Lure of the Wilderness	mel-c	AYC	—	1	5	Steel Town	mel-c	A	
—	12	3	Lydia Bailey	adv-c	A	3	13	1	Stolen Face	dr	A	
—	6	6	Ma and Pa Kettle at the Fair	com	AYC	—	1	9	Story of Robin Hood, The	adv-c	AYC	
—	4	13	Macao	mel	A	—	4	2	Story of Will Rogers, The	biog-c	AYC	
—	1	2	Man from the Black Hills, The	wes	AYC	—	2	8	Strange Ones, The (French)	dr	A	
—	2	13	Mara Maru	mys-mel	A	—	5	1	Strange World	mel	A	
—	2	3	Marry Me (British)	com	A	—	5	1	Stranger in Between, The (British)	dr	A	
1	13	3	Marrying Kind, The	com	A	—	2	4	Strollers, The (French)	dr	A	
1	4	1	Merry Widow, The	mus-com-c	A	1	10	3	Sudden Fear	mel	A	
1	4	2	Miracle of Our Lady of Fatima, The	dr-c	AYC	—	3	7	Talk About a Stranger	dr	A	
—	7	12	Miserables, Les (Italian)	dr	A	—	5	—	Target	wes	AYC	
—	1	2	Miss Italy (Italian)	dr	A	—	5	3	Tarzan's Savage Fury	adv	AYC	
—	7	5	Miss Julie (Swedish)	dr	A	—	6	6	Texas City	wes	AYC	
—	1	6	Models, Inc.	cri-mel	A	—	3	3	Thief of Damascus	adv-c	A	
—	2	6	Montana Territory	wes-c	AYC	—	17	3	Three for Bedroom C	com-c	A	
3	4	5	Murder in the Cathedral (British)	dr	A	—	2	6	Three Sinners (French)	dr	A	
—	5	10	Mutiny	hist-mel-c	AYC	—	3	1	Thundering Caravans	wes	AYC	
—	2	1	My Man and I	soc-dr	A	1	9	2	Tomorrow is Too Late (Italian)	dr	A	
2	12	2	My Six Convicts	mel	A	—	3	—	Train of Events (British)	dr	A	
2	6	8	My Son, John	propaganda-dr	AY	1	6	3	Under the Paris Sky (French)	dr	A	
—	12	2	Narrow Margin, The	cri-mel	A	—	5	2	Untamed Frontier	wes-c	AYC	
1	12	—	Never Take No for an Answer (Italian)	dr	AYC	—	3	—	Untamed Women	mel	A	
—	4	—	New Israel, The (Israeli)	doc	AYC	2	10	4	Valley of the Eagles	mys-mel	A	
—	1	2	Night Raiders	wes	AYC	—	2	2	Voice in Your Heart, A (Italian)	mus-dr	A	
—	1	4	Night Stage to Galveston	mus-wes	AYC	—	4	—	Volcano (Italian)	dr	A	
—	4	5	No Resting Place (British)	dr	A	—	3	3	Wagons West	wes-c	AYC	
—	3	9	No Room for the Groom	com	A	1	7	7	Wait Till the Sun Shines, Nellie	dr-c	A	
2	2	—	O. Henry's Full House	dr	A	—	1	12	4	Walk East on Beacon	mys-mel	AYC
—	1	11	Okinawa	war-dr	AY	—	1	5	Wall of Death (British)	mel	A	
—	4	5	Oklahoma Annie	mus-com-c	AYC	2	10	5	Washington Story, The	dr	AYC	
—	1	8	One Big Affair	com	A	—	1	3	Water Birds	doc-c	AYC	
—	4	2	One Minute to Zero	war-mel	A	1	12	4	We're Not Married	com	A	
—	12	5	Outcast of the Islands	mel	A	—	2	6	What Price Glory?	mus-war-dr-c	A	
—	6	9	Outcasts of Poker Flat, The	dr	A	—	5	11	When in Rome	dr	AYC	
—	2	7	Outlaw Women	mel-c	A	—	12	1	Where's Charley?	mus-com-c	AYC	
—	3	4	Pace that Thrills, The	mel	A	—	7	8	White Corridors (British)	dr	A	
—	3	3	Paris Nights (French)	mus-com	A	—	4	11	Wild Heart, The	dr-c	A	
—	3	5	Park Row	dr	A	—	1	5	Wild Horse Ambush	wes	AYC	
2	11	3	Pat and Mike	com	A	—	4	2	Wild Stallion	wes-c	AYC	
—	8	2	Path of Hope (Italian)	dr	A	1	10	5	Winning Team, The	biog	AYC	
—	8	8	Paula	dr	A	—	5	7	Without Warning	cri-mel	A	
—	2	5	Perfectionist, The (French)	dr	A	—	4	2	Woman of the North Country	mel-c	A	
2	4	3	Pictura — An Adventure in Art	doc	A	1	8	2	World in His Arms, The	mel-c	AYC	
1	14	—	Pride of St. Louis, The	com	AYC	—	8	—	Yank in Indo-China, A	war-mel	AYC	
—	5	2	Prize, The (French)	com	A	—	6	2	You Can't Beat the Irish (British)	com	A	
7	3	1	Quiet Man, The	dr-c	AYC	—	5	1	You for Me	com	A	
—	5	1	Rainbow 'Round My Shoulder	mus-com-c	AYC	—	3	5	Young and the Damned, The (Mexican)	dr	A	
—	9	6	Red Ball Express	war-mel	AYC	—	6	6	Young Man with Ideas	com	A	

## The Consumers' Observation Post

(Continued from page 4)

HOUSEHOLD CHORES involving reaching, bending, stooping, and twisting are quite exhausting, according to a recent study — if such were needed to reach that conclusion. Considerable energy can be saved by using cleaning tools and cleaning utensils that have long handles, advise home economists. Instead of bending double in the daily chore of cleaning the bathtub with a cloth, use a long-handled brush. Long-handled push brooms, long-handled dustpans, and long-handled wax applicators are also useful in eliminating bending and stooping.

\* \* \*

CORRECTION, PLEASE: Base rate for the Zien annual plumbing maintenance plan offered by Zien Plumbing and Heating Co., Milwaukee, is \$17 (instead of \$14 as reported in the August Observation Post). Please note the spelling of the name, which was incorrectly given. The company advises that it does not pester its customers with salesmen to buy the equipment it has for sale.

\* \* \*

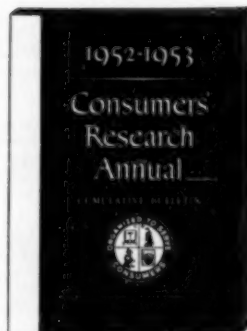
PLENTY OF PROTEIN for pre-school children is essential for developing strong muscles and good posture. Dr. Philip C. Jeans of Iowa State University's College of Medicine has pointed out that many children who have average weight for their height and age lack good muscles and good posture. They have been given plenty of calories but not enough from muscle-building protein foods such as meat, eggs, fish, milk, and the high-protein vegetables. Dr. Jeans comments that it is uncommon to find a 4-year-old with good posture, because the diet has been deficient in proteins, and muscles have not had the expected normal growth. His position is re-

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## Buy wisely every time you make a purchase!

CONSUMERS are choosier these days. They do a lot of looking before they buy. That's what merchants and salesmen report. It's a good sign and we applaud this state of mind. When consumers refuse to buy just anything that is shoved over the counter at them and when they show a decided preference for good quality products sold at moderate prices, they will sooner or later be accommodated. Consumers' Research can be of great help to such discriminating buyers. Each month in the pages of Consumers' Research Bulletin, we present the results of scientific tests and expert evaluation of a wide

selection of the many products consumers need and use in their daily living. From toilet soap to automobiles, furniture polish to the new carpets, you will find CR's clearly presented listings of products by brand name, rated for comparative quality on the basis of test findings, can assist you in making a wise decision and getting the most for your money. Many subscribers tell us that they save more than the cost of a subscription on a single important purchase. Just turn the page for information about rates and use the convenient order blank today!



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inforced by Miss Elizabeth E. Ellis, home economist of the University of New Hampshire, who suggests that adults should get half their protein from animal sources and children even more than this. From the economy standpoint, she suggests that good protein can be obtained from foods in the following order (cheaper foods first): skim milk, cottage cheese, American cheese, pork liver, codfish or haddock, whole milk, tuna fish, pork shoulder, eggs, hamburger, chicken, round steak, veal chops, pork chops, and lamb chops.

\* \* \*

#### NEW OR NEWLY TESTED:

**No-Nail Hangers** (No-Nail Hanger Co., Mott Building, Flint 3, Mich.), 12 for \$1 (no additional postage). Device consisted of a small metal hook inserted into a piece of gummed cloth tape about 2 inches long and folded in the center. In CR's use tests, the gummed cloth hangers were found to adhere well to painted plaster walls, glass, and some wood surfaces. The hangers could be affixed to wallpaper, but when they are pulled loose they remove the surface of the paper and hence would leave an unsightly spot. They were generally satisfactory for hanging small pictures on plaster walls, glass, and some wood surfaces, but the desirability of using them for hanging a full 10-pound mirror (the weight claimed as maximum on label) was considered somewhat doubtful. In apartments where it is undesirable or difficult to put up pictures with nails, the hangers would be quite useful for light pictures.

**Ru-Rita Hand Dryer** (Manufactured by Solis Mfg. Co., Zurich, Switzerland), \$19.95, including stand, obtained by mail from Gertz, 162-10 Jamaica Ave., Jamaica 2, N.Y. This device is intended to aid in drying the hair after a home shampoo. It operated on alternating or direct current at 110 volts, with four heat settings, cold, warm, hot, very hot. In actual service, it proved to be quite satisfactory and speeded up the time required to dry the hair after a shampoo. Since it dried only one side of the hair at a time, it was not so efficient as the professional-type dryer used in beauty shops. It was, however, easy to assemble and move about. Would be considered expensive, but might be worth the price where there are several women in one household accustomed to doing their hair at home. Rating is B. Intermediate.

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# Phonograph Records

BY WALTER F. GRUENINGER

*Please Note: In the ratings AA indicates highly recommended; A, recommended; B, intermediate; C, not recommended. Although nearly all new releases of serious music are heard, space narrows comment, generally, to items which merit high ratings.*

**Beethoven: Archduke Trio.** Fournier, Janigro, Badura-Skoda (violin, cello, piano). Westminster WL 5131. \$5.95. Incisive, forceful performance of a Beethoven masterpiece. Fine balance between instruments and wide range recording.

**Interpretation AA  
Fidelity of Recording AA**

**Beethoven: Trios for Violin, Viola and Cello (Op. 9, Nos. 1 & 2).** Bel Arte Trio. Decca DL 9635. \$5.85. Beethoven's string trios, written before his first quartets, stand apart as superb compositions for this medium. The playing is robust, completely satisfactory. But the slightly over-resonant studio destroys the intimacy these works require, though the recording is good in all other respects.

**Interpretation AA  
Fidelity of Recording AA**

**Berlioz: Harold in Italy.** Primrose (viola) with the Royal Philharmonic Orchestra under Beecham. Columbia ML 4542. \$5.45. The work begins like a concerto and ends like a symphony. While not up to Berlioz's *Symphonic Fantastique*, it is cut from the same cloth. The performance is masterly in every way and the recording is full, rich, resonant.

**Interpretation AA  
Fidelity of Recording AA**

**Haydn: Symphony No. 94 ("Surprise") & Mozart: Eine Kleine Nachtmusik.** Vienna Philharmonic Orchestra under Furtwängler. His Master's Voice LHMV 1018. \$5.67. Up until now His Master's Voice recordings made in Europe have not been available on 33 and 45 rpm. disks. But RCA Victor has put out 20 LP and 45 rpm. albums of these recordings. Of those heard, this one was outstanding. The playing is exemplary and the recording rich, though not as strong in the high end and as transparent as the best.

**Interpretation AA  
Fidelity of Recording AA**

**Mozart: Violin and Piano Sonatas K377, K305, K58.** Barylli and Badura-Skoda. Westminster WL 5145. \$5.95. Commendable teamwork, musicianship and technical assurance is disclosed in this playing of one trifling and two good sonatas. The recording of the violin in a few spots near the final grooves of K58 is a little broad. Otherwise, excellent.

**Interpretation AA  
Fidelity of Recording AA**

**Rimsky-Korsakov: Scheherazade.** Minneapolis Symphony Orchestra under Dorati. Mercury MG 50009. \$5.95. Better orchestras have recorded this popular piece, though there is no great fault with this performance. But the recording here is spectacular.

**Interpretation AA  
Fidelity of Recording AA**

**Schubert: Trio in E Flat Major.** Fournier, Janigro, Badura-Skoda (violin, cello, piano). Westminster WL 5121. \$5.95. Noble, dramatic music played without exaggeration and with enthusiasm and fine nuance. Close-in recording of good range and balance.

**Interpretation AA  
Fidelity of Recording AA**

**Schumann: Dichterliebe.** Pierre Bernac (baritone). Columbia ML 2210. \$5.45. Charming, delicate song cycle containing many of Schumann's best songs. Bernac's artistry almost covers the fact that his voice is unusually light and small and lacks the beauty of the more popular baritones. Playing the important piano part is the distinguished Robert Casadeus. Excellent recording.

**Interpretation A  
Fidelity of Recording AA**

**Sibelius: Concerto in D Minor for Violin and Orchestra.** Camilla Wicks with the Symphony Orchestra of Radio Stockholm under Ehrling. Capitol P 8175. \$4.98. Melodic, dramatic concerto which is fast becoming one of Sibelius's most appreciated works. The young American violinist plays with understanding, vigor, and interesting phrasing, though the sheen of the old Heifetz recording is lacking and there is an excess of "fits and starts" playing. She is well supported. Satisfactory recording except for a certain opaqueness and muddiness in the orchestra. The disk, though not perfect, is superior to the new, competitive Arnold Eidus disk (Stradivari STR 611) which sounds as though soloist and orchestra were thousands of miles apart.

**Interpretation A  
Fidelity of Recording A**

**Ancient Music of the Church & Loewe: Ballads.** William Warfield (baritone). Columbia ML 4545. \$5.45. Interesting music rarely heard. Warfield is on the way to becoming one of our top baritones. Except for some distortion in the inner grooves of the church music, a fine recording.

**Interpretation A  
Fidelity of Recording A**

**Encores by Zino Francescatti (violin).** Columbia ML 4534. \$5.45. One may quarrel with a point of interpretation here and there, but on the whole this is fiddling of a high order. The recording is slightly uneven, as though some numbers were recorded at a different time than others but all of it is good. This record offers a feast for those who like violin pieces by Kreisler, Poulenc, Massenet, Vitali, etc.

**Interpretation AA  
Fidelity of Recording AA**

## OTHER LP'S HIGHLY RECOMMENDED (for interpretation and for fidelity)

**CAPITOL — Shostakovich: Quintet (Op. 57).** Hollywood String Quartet with Victor Aller (piano). P 8171.

**CLAREMONT — Hindemith: Sonata for 2 Pianos and Sonata for One Piano, Four Hands.** Karl and Margaret Kohn. CR 1203.

**Schumann: Fantasy Piece (Op. 11, No. 2) and Fantasia in C Major (Op. 17).** Lee Pattison (piano). 1202.

**COLUMBIA — Traviata: Symphonic Allegro & Couperin-Milhaud: Overture and Allegro.** Philharmonic-Symphony Orchestra of New York under Mitropoulos. AAL 16. **Walton: Four Dances from "Facade" & Bernstein: Three Dances from "Fancy Free."** Philadelphia Orchestra Pops under Hilsberg. AAL 17.

**DECCA — An Andres Segovia Recital (guitar).** DL 9633. **Christmas Songs** by Byrd, Gounod, Ravel, Rossini, etc. Jane Wilson (soprano). DL 9554.

